An Address

ON

SOME INSUFFICIENTLY RECOGNIZED POINTS IN THE DIAGNOSIS OF DISEASE.

DELIVERED BEFORE THE EAST YORKSHIRE DIVISION OF THE BRITISH MEDICAL ASSOCIATION AT HULL.

BY

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GENTLEMEN,—The title of this address may not improbably excite some wonder in the minds of my audience. It may appear to be a bold step to assert in these days, even tentatively, that there still remain any points which elude or fail to receive full consideration in matters relating to diagnosis. It is now a mere platitude to speak of the extraordinary progress that has been made in the science and the art of medicine in the course of the last fifty years, for this is recognized on all hands, and we know well that fresh fields of research are being opened up daily by skilled and assiduous cultivators. So much so is this the case that it has become well-nigh an impossible task for the hospital teacher or the most diligent practitioner to follow up and utilize the products of these investigators. Never in the history of medicine was the first aphorism of Hippocrates borne in upon us with greater weight and solemnity than in this twentieth century, and we may well ask ourselves, Who, indeed, is sufficient for these things? To illustrate my statement, I will only ask you to compare the classical treatise of Watson—which was the textbook in medicine of most of the greybeards now in our profession—with the outcoming new edition of Allbutt's *System of Medicine*, for this provides us at once with a standard wherewith to measure the progress that has been attained in our day. It is, indeed, startling and amazing, and I venture to think that no such advance can be placed to the credit of any other learned profession. I grant at once that the engineer, the electrician, and the astronomer may point to remarkable progress; but, if we regard the relation of their splendid efforts to the general welfare of our common humanity, I am bold enough to declare that our progress is distinctly the greater and more important.

Notwithstanding this notable advance in our knowledge, we appear to have arrived at a curious stage as regards medical doctrines at the present time. We hear it widely affirmed that our old medical and surgical books are now effete, and rather misleading than helpful. We witness a spreading wave of incredulity as to the virtues and value of many therapeutic measures which were practised and commended by our predecessors. We are inclined to ignore the preparations of our *Pharmacopoeias* and to employ the latest products of synthesis and many extraordinary combinations of food and medicines for our patients.

We lend a willing ear to the last declarations of the laboratory experts, and proceed to adopt their suggestions. I suppose this has to be to some extent, but I greatly fear that in such proceedings we run the risk of crowding out a good deal of soundly acquired and proved experience—if, indeed, this has ever been acquired—and of becoming medical scientists rather than expert medical practitioners.

Let me not be misunderstood. I am in no degree averse from the best and most necessary researches of all our laboratories. These must be prosecuted, and especially those which are carried on in clinical laboratories, of which we still have too few in our great medical schools in this country; but I maintain that in the best interests of our patients there are limits to the too ready employment of such measures as are now month by month foisted on our attention. Let us consider what is the meaning of experience in our profession. What is it that we call for, and fall back upon, in any grave crisis in our clinical work? Is it not the opinion formed by the man who has seen much of disease, who has watched it and pondered over it, and best conducted his patients through their maladies? Is it in such crises that we *instinctively* appeal to the last experiences of the laboratory operator? Some of you will doubtless reply to me in the affirmative, and tell me of the hopelessness of treating diphtheria, tetanus, anthrax, and other toxic invasions on any other basis than that of the assured benefits derived from the laboratory, and, if so, I am entirely with you. And if you have come to regard *all* disease as the result of microbic or otherwise toxic intrusion into the body, your pathogeny is at once simplified, and you are henceforth the slaves of the laboratory, and have become administrators of serums and antivaccines. Well, gentlemen, I, for one, am not yet prepared to declare myself a convert to such extreme views. A long clinical experience bids me to keep my head clear, if I can, in these days (and it is no easy task), and to see all things medical with a *mens sana* and a *mens medica*. I have found that a large part of our best art is still founded on empiricism, and that we cannot give reasons for our practice which will satisfy the purely scientific mind. In daily practice, for the best interests of my patients, I am content to be a medical artist rather than a medical scientist, but I am ever ready to avail myself of the best science that comes to me with the approval of careful experience.

If we are to wait for a scientific explanation of every step we are compelled to take in our daily work, I much fear that our patients will also have long to wait for relief, and that we too shall have long to wait for reputation. This is, indeed, one of the great difficulties that beset us. It renders it hard, and in some cases an impossibility, for certain men in our profession to practise efficiently. They cannot rest content with mere empiricism; they want a scientific reason to justify every dose of medicine and to support every method they employ. Not finding it, they leave our ranks, and are tempted to scoff at our efforts as mediaeval, tentative, and uncertain. This is a clear indication, as I venture to think, of the absence in these men of the *mens medica*. No, gentlemen, the best practice of medicine is not yet altogether scientific, and if we are to help our patients, we must for the present do what carefully acquired experience justifies us in doing. Our art is, indeed, based upon many sciences, but it is not yet scientific. It is certainly becoming more so year by year, as we gratefully acknowledge. In the meantime we have carefully to cultivate the art of medicine, taking advantage gradually of every scientific fact which is of proved utility.

These considerations, preliminary indeed, bring me now to the topic on which I desire to speak this evening, namely, to urge the importance of a study of the patient no less than a study of his disease. I am strongly impressed with the belief that there is a tendency at present to pay rather too exclusive attention to the pathological process which is in progress, and to neglect the peculiarities of the individual and the conduct of his particular constitution in relation to the particular illness. In the case of a manifest toxic invasion, I think we are now rather too apt to be engrossed with the *microbe* and its delinquencies, and to forget the equally important matter of the *soil* in which these work out their mischief.

We are disposed to regard the soil, or tissues, of the patient as an indifferent medium, akin to the agar-agar of the laboratory, equally ready to react and encourage the development of such processes as may be expected to follow on inoculation. A little consideration of the matter plainly corrects this view, and clinical experience proves that the soil is commonly as much concerned in the process as is the seed. The personal factor in disease has always to be reckoned with at the bedside, and from the nature of the inquiry here this point cannot be solved in the pathological laboratory. This constitutes, indeed, one of our great difficulties in experimentation. I would illustrate this very simply by taking the case of the transmission of bovine tuberculosis to the human subject. As you are aware, there is a preponderance of scientific opinion to the effect that such transmission is not only possible but certain, in defiance of Professor Koch's strong view to the contrary. I am not aware that there are certain facts determined as to the direct infection by milk of tuberculous cows in the case of human subjects. We cannot deliberately administer obviously tuberculous milk to children to prove this, but we know that large quantities of such milk are daily partaken of by children and adults, since so many apparently healthy cows are found to be

good milkers, although obviously vulnerable to tuberculin when tested by it.

The experiment is thus being made for us in the homes of too many of our fellow-creatures, and if the results are not more serious than might be expected, we may explain the fact by assuming that there is often an inherited immunity which is protective, or by finding that the infection has been arrested in the mesenteric glands, and rendered inoperative for further development. Dr. Nathan Raw, of Liverpool, who has studied this question with much care, informs me that no actual proof exists of the production of tuberculosis in children, as no one has made the experiment of feeding with milk known to be tuberculous, but he believes that all the collected facts point in the direction that abdominal tuberculosis occurring in the milk-drinking period is due to infected milk, more especially as the bovine bacillus has been isolated from the mesenteric glands by both the British and German Commissions on Tuberculosis. He mentions further, that in those countries where raw milk is not taken, abdominal and miliary tuberculosis is practically unknown.

Professor Koch appears now to be wavering in his opinion. He agrees that bovine tuberculosis may be conveyed, but is not yet prepared to admit that pulmonary tuberculosis is produced by it. Our position, as clinicians, is quite clear in the matter for the present, and we must stand by the British view of the infection from a bovine source, and act accordingly, and without delay.

The personal or individual factor is probably different in the case of the lower animals as compared with the human subject, but in the former there are found to be differences of susceptibility, even in individuals of the same class.

Those who see much of family practice over long periods become aware of family and personal peculiarities which tend to modify the incidence and course of various diseases, many of which are not so manifest to those who, as Sir Andrew Clark used to say, "see sick people, but have no patients" in the ordinary sense. A knowledge of the antecedent history, both family and personal, is necessary to a full understanding of this matter, and this is not readily secured amongst the poorer classes. I think we often fail to make, or try to make, what is called a physiognomical diagnosis of our patient—that is, to judge promptly, by practice of it, as to the habit of body or diathesis of the individual. Here, again, we are apt to regard most individuals as alike in tissue proclivity and tendency, and to expect the varied processes of disease to act indiscriminately upon each of them. Yet we find that this is not the case, some reacting mildly and others gravely; a toxic dose being borne well and disposed of favourably in the one, and in the other rapidly proceeding to fulmination and death. Again, we meet with absolute immunity in certain individuals, a condition not yet fully explained. We note the greater liability to some diseases at certain developmental epochs, a matter of importance, not seldom, in difficult and puzzling cases. Thus, amongst those which present unusual symptoms in children and young adults, we may often find the explanation in tuberculosis; in adults up to middle life, many strange and untoward symptoms are found to be dependent on unrecognized syphilis; while, in the aged, we find that some of the most puzzling conditions are sometimes ultimately resolved by a sharp attack of acute gout. Let us consider next two of the commonest diathetic conditions we have to deal with—the scrofulous or strumous habit, and the arthritic, often called rheumatic, habit. The facies in each is sufficiently distinct; the former presents two main varieties, known respectively as the "ugly" and the "pretty" struma. The "ugly" variety is that commonly described in textbooks. Its characters are the full, big face, swollen neck, sallow complexion, tumid lips, with catarrhal manifestations. The "pretty" variety presents finely-cut features, with delicate complexion, fine hair, long eyelashes, and various qualities which clearly indicate both beauty and delicacy. These two types present us with features which are both vulnerable, and a ready prey to the onset and development of tuberculosis should infective intrusion occur. The "ugly" variety it was which first gave rise to the term "scrofula," from the full and short, porcine quality of the neck. Note, that neither of these may be called in the first instance *tuberculous*. They present a soil ever ready to lead to tuberculous infection.

The "ugly" variety, indeed, is a veritable forcing ground for every kind of vicious microbic intrusion, so that such individuals are the worst subjects for all infections, and have every ailment in a grave form. They succumb in early life to these, or manifest very indolent recuperative power. They rarely recover from nephritis, and in later life are the worst subjects of syphilis if smitten by it.* This condition also modifies the course of many illnesses, and presents strange blends of morbid states when mixed infections occur. For instance, in the tropics, I am inclined to believe that such subjects are specially prone to suffer from hepatic abscess.

We now find these individuals described as tuberculous *ab initio*. This I regard as a grave error. *They need never become tuberculous, although they are a ready prey for the infection.* In the "pretty" variety, there is more particularly a tendency to mesenteric and pulmonary tuberculosis, and perhaps to articular disorders. I think we do not adequately recognize these facts at the present time. We may regard these subjects in respect of tuberculosis as the *ens in potentiâ*, and when definitely infected as presenting the *ens in actu*. The moral of it all is when detected as specifically vulnerable elements in a community to protect such subjects, even more than others, from tuberculous environment and infection.

Let us consider next the subjects of another habit of body—namely, the arthritic or so-called rheumatic. They present a peculiarity and delicacy of constitution very different from that of the scrofulous. We note in them an absence of the vulnerability of the lymphatic system which is so marked a feature in the subjects of struma. The facies does not suggest delicacy, there being neither tumidity nor sallowness. There may be even in early life some vascularity of the face and a general good development. The tendency is to suffer from the various manifestations of rheumatic poison, whether developed in the throat, the skin, the heart, the joints, and the brain, especially during adolescence, the tendency to rheumatic infection passing off more or less after the third decade. Later in life some of these subjects become gouty, and are apt to suffer from myalgia, fibrositis, lumbago, sciatica, and neuritis, and many of them present examples of arterial sclerosis and contracting kidneys about the fifth decade. The physiognomy in the latter case is very different from that of the subjects of chronic parenchymatous nephritis. One of the most marked features of this diathesis is its resistance to tuberculous infection—a point little regarded. Even if tuberculosis is acquired it has a hard struggle to progress, and is either arrested or held in check for many years as a rule. It has been humorously asserted, indeed, that one way of avoiding tuberculosis is to grow gouty; and truly what is bad for gout is very good for tuberculosis—namely, full dietary, or what the French call forced alimentation. The prognosis in arthritic subjects, if no cardiac complications have occurred in early life, is good for longevity provided a suitable environment is secured, and if what Sir Andrew Clark termed "physiological righteousness" is observed.

I have been speaking of what may be regarded as pure specimens of these two habits of body; but, of course, we meet with many examples where there are blends of constitutions, intermixtures of diathesis, in which one condition may be more prominent than the other, yet potential for modification. Hence we find blends of struma and rheumatism, a bad conjunction; and blends of gout and struma, a rather less grave coalescence—less grave, I say, because the gouty element generally acts protectively, and permits of a better prognosis for longevity. Many of these arthritic subjects manifest a high arterial tension in middle life, and so, as Sir T. Clifford Allbutt suggests, we may be concerned for them should they fall victims to pneumonia, or, in later life, suffer from cerebral haemorrhage. Such tendency, of course, puts us on our guard and demands attention to habits of life and diet. Yet another peculiarity pertains to arthritic subjects, and it is their singular susceptibility to the gonococcal virus. This infection is apt to be more serious in some than in others, especially in those of gouty proclivity, manifesting a special vulnerability in

*I find that this point was noted by W. Heberden at the end of the eighteenth century. "Struma et lues venerea nonnunquam eundem hominem simul occupant: quod ubi fit, altera alterius nocendi vim plurimum auget." *Commentarii de Morborum Historia et Curatione* (Cap. lxxxvii, de Struma.)

their textures. In these subjects, too, we meet with Dupuytren's contraction and the curved little finger, known as "Landouzy's campodactylie," which in my experience have no origin in purely rheumatic conditions. They are further liable to a hyperinotic state of the blood, whereby there is a special tendency to phlebitis and blood-clotting, a point to be remembered in the puerperal state in the case of gouty women, who are more than others liable to pulmonary arterial thrombosis. A due consideration of clinical facts such as these surely lends support to the doctrine of the diatheses which is at the present time too much discarded, and even denied and derided by some. I regard them as *fundamental* and amongst the certainties of medicine, and to disregard them is, I venture to think, an indication of the absence of clinical acumen in the disputant. This tendency to ignore the personal factor in diseased persons is probably to be attributed to our modern devotion to laboratory revelations, and our less assiduous observation in detail of the human patient actually before us. Being over-engrossed with the seed, we are neglecting the soil, and, as physicians, we have to take good heed to both in our daily duties.

There is much to be said in favour of a nervous or neurotic habit of body, where we find plain evidence of instability of nerve centres, with tendency to break down in various parts of the cerebro-spinal axis—a condition plainly inherited and transmissible, often blending with other diathetic proclivities. For an example, take the case of chorea, well termed "cerebral rheumatism." Here we have the distinct rheumatic infection, together with nervous erethism and instability. The rheumatic and choreic child is commonly the nervous child in a family, as pointed out by Cheadle. Other members may be infected, but they do not present vulnerable points in their cerebral cortex.

Neurotic disorders do not present gross textural change, but simply perverted nervous action. In the group of "family" diseases of the nervous system we find the inborn tendency to a breakdown of some nervous tracts, which may occur definitely in several members of a family, in one or successive generations, in early or late adolescence.[1]

We may acknowledge a difficulty here, because we have in many cases no particular physiognomy to guide us in determining the subjects of neurotic tendency. We have, however, other features in abundance to observe, and especially the personal and family life-histories, so far as we can gather them, to throw light on individual cases. There may be a solitary case in a family, but antecedent histories may help us to find a clue to the particular infirmity which has cropped up.

Myxoedema and cretinism in an early stage may long remain unrecognized unless we are on the look-out for the peculiarities of the disease as disclosed by a change of physiognomy and of habits. The same may be said in regard to early phases of paralysis agitans before the onset of the tremors; thus, the mask-face, and the slow gait, with mental hebetude, may long precede the characteristic tremors, the piping voice, and the sweatings. If we pay too much heed to the disease, and neglect to study the patient, we may miss many indications of early phases of disease. Where a long report has to be made on a person under examination, say for a life assurance policy, it is possible to be so much engrossed in recording answers to questions that we fail to study the individual before us sufficiently, and so miss the fuller appreciation of the particular features of the case. Some of these insurance papers, especially the American ones, are so full of details that they are apt to lead to an inadequate appreciation of the examinee before us, and to occupy too much time.

The study of localized pain requires extreme care, and a minute series of inquiries and examinations which demands much time and thought if an exact diagnosis is to be made. A flippant diagnosis of "rheumatism," or "neuritis," or "indigestion," may be very wide of the facts before us, but we are expected to form an opinion with rapidity and certainty, and it may be a matter of days before we can trace a pain to its true source. The patient and his friends do not understand our proper hesitation and postponement of a satisfactory opinion on the case.

In cases of apparently simple anaemia, especially in males in middle life, we may sometimes discover the reason of our inability to promote recovery by attending to the minute histology of the blood, and, finding an undue eosinophile count of leucocytes, be led to the discovery of ankylostomiasis, which is perhaps more common than is generally believed, owing to the extended travels of our population at the present day.

The numerous varieties of skin diseases present us with a vast field for the study of constitutional states of body. They almost always bear on this question, and their removal commonly rests with a recognition of the particular personal habit, the strumous tending to pus formation, the arthritic to serous effusion or scaling with pruritus, the bilious to xanthelasma, and the diabetic to vitiligoidea. Since the study of botany has been neglected in recent years in the medical curriculum, there has been, as I believe, a loss of discriminating power in our students, and less ability for accurate differentiation in common observation—a mental faculty greatly encouraged by early botanical study. The Edinburgh school has always recognized this, and insisted on its importance for the future physician, and, as I venture to think, with much benefit. Indeed, I believe that a little more botany and careful study of the materia medica, and a more assiduous observation of the action of some of our old approved remedies, would assuredly sharpen the clinical wits and acumen of our modern students and practitioners. Some measure of the over-elaborated studies in chemistry might well be curtailed to allow of this—certainly in the case of the average pupil, who has soon to make his way in general practice.

In my clinical teaching I have sometimes said to my pupils that there are almost certainly things that we are looking at to-day in our patients which, as yet, we do not see. Yes, looking at, without seeing, things which some one will some day see and recognize, and will wonder how we in our day failed to see and interpret them. This has been the case in the past, and it will assuredly be so in the future if we patiently carry on our physiognomical studies at the bedside. I find that Browning has put this idea in the following pregnant lines:

> I tell you, men won't notice; when they do
> They'll understand.

Lastly, allow me to hope that you will not regard these expressions of opinion as mere *obiter dicta*, suggestive of servile conservatism on my part, for I have come to these conclusions after a long experience and much thought. The views I have ventured to lay before you, imperfectly, as I well know, are not new. I think they are at the present time insufficiently recognized and applied in daily practice by many of us. At the end of the sixteenth century we find that they had not escaped the reflection of one of the greatest philosophers of all time, for in his Essays on the *Regimen of Health* (1597) we may note the following passage by Bacon (Lord Verulam): "Some Physicians are so regular in proceeding according to art for the *disease*, as they respect not sufficiently the condition of the *patient*." This is the moral of my words to-night, and I will leave it to your careful consideration.

REFERENCE.

[1] Dr. Ormerod, Harveian Oration, 1908.

DR. F. W. TWORT, in a paper on the influence of glucosides on the growth of acid-fast bacilli, presented to the Royal Society on March 4th, described a new method of isolating human tubercle bacilli directly from tuberculous material contaminated with other micro-organisms. Among 43 glucosides tested with acid-fast bacilli it was found that one—ericolin—killed off a large number of species of micro-organisms, especially bacilli of the colon group and various cocci, but had very little effect on the acid-fast group of bacilli. By means of this glucoside, the isolation of tubercle bacilli directly from human sputum contaminated with other organisms became quite easy. A lump of sputum was placed in a 2 per cent. solution of the glucoside in distilled water, and kept at 38° C. for three-quarters of an hour to an hour. Pure growths of tubercle bacilli could then be obtained on Dorset's egg medium in fourteen to twenty-eight days. The tubes were sometimes contaminated with a few other organisms, chiefly tiny colonies of streptococci and slow-growing organisms of the streptothrix group, but they were so few that they in no way interfered with the tubercle colonies, which could be easily sub-cultured.

An Address

ON THE

DIAGNOSIS OF FEVER IN PATIENTS FROM THE TROPICS.

DELIVERED AT A MEETING OF THE WESTMINSTER DIVISION OF THE METROPOLITAN COUNTIES BRANCH.

BY

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I HAVE twenty minutes in which to speak about certain points which have to be attended to in attempting the diagnosis of fevers in patients coming from the tropics. The time is very short. I shall not waste it, therefore, in preliminaries, but proceed at once to my subject.

Sources of Fallacy.

The first point I shall urge is a very important one. It is the necessity for the diagnostician to disabuse his mind of the very natural idea that because a fever has been contracted in or is occurring in a patient from the tropics it must necessarily be a tropical fever, symptomatic of some infection or condition peculiar to the tropics. This in my experience is one of the commonest and most misleading diagnostic fallacies. It so happens that my line of practice lies in great measure among patients from the tropics; but I am bound to say that half the patients from the tropics sent to me for an opinion or who come to me under the idea that they are suffering from tropical disease are not so suffering, although very likely they have fallen sick in the tropics or soon after return from the tropics. When you have dealings with a Scotsman you are apt to be obsessed with the preconceived idea of the national reputation for canniness, forgetting that, in the main, Scotsmen are very like other men, having the same physical, moral, and mental attributes. Just so, and perhaps even more so, in our contemplation of disease from the tropics. The major portion of a Scotsman's attributes is that of other men; only a very minor portion is peculiar. The major portion of disease in and from the tropics is ordinary disease; the minor portion special. Therefore when you encounter a fever in a patient from the tropics, think last and least (unless the diagnosis be glaringly obvious) of a tropical fever. Think first of and carefully test for those great and pandemic conditions—tuberculosis, syphilis, typhoid, malignant disease, and sepsis. If the seat and nature of the disease are not at once obvious, make it an inflexible rule to go over all the organs systematically, one after the other, beginning at the vertex and ending at the soles of the feet. I could tell many a story illustrative of the wisdom and necessity for this precaution—so obvious when stated thus pointedly, but, like so many other obvious things, so frequently overlooked or ignored. This is the first and perhaps the most important point I would make.

The next and equally obvious point I would impress on you is not to be misled by the diagnosis of malaria which in many instances the patient is nearly sure to volunteer. Patients' statements in this respect are apt to be very positive and correspondingly impressive. Such tropical cases come to you not so much with the idea of your diagnosing their fever as with the idea of getting you to treat them on their own diagnosis. I have seen many cases of tuberculosis, of endocarditis, of liver abscess, of pyelitis, of syphilis overlooked for this reason. It should be an axiom with us never, without a thorough and independent examination, to accept another man's diagnosis, least of all a patient's diagnosis.

Having excluded as far as you can these sources of fallacy, then, and only then, you may conclude that the fever, let us suppose, you are trying to diagnose is probably a tropical one. Your next step should be to put to yourself the question, What are the tropical diseases likely to be brought to this country and which are associated with fever? Of course, we may safely exclude such acute and short fevers as yellow fever, dengue, and so forth; these need not be considered.

Tropical Fevers.

Let me enumerate what I might designate the important tropical fevers in the approximate order of the frequency with which they present themselves in practice here. First of all, of course, comes malaria; next, perhaps, hepatitis and liver abscess; then Mediterranean or Malta fever; next, and at a long interval, kala-azar, trypanosomiasis and sleeping sickness, relapsing fever, elephantoid fever, and probably other infections about which we as yet know nothing, but only suspect their existence. Each of the fevers I have mentioned has some feature or features by which it may be recognized, or, at all events, suspected.

Tests of Malaria.

Manifestly our first duty is to recognize or to exclude the commonest of them all—namely, malaria. Fortunately, this is easily done. Provided we set about it in the proper way and have a little time allowed us there is no disease so easily and so surely recognizable as malaria, for of this infection we have not one or two, but three absolutely pathognomonic tests. I am in the habit of describing these tests as, *first*, the clinical test of periodicity; *secondly*, the therapeutical test of the action of quinine; and *thirdly*, the microscopical test, the determination of the presence or absence of the malaria parasite or of its product, malarial pigment, in the blood.

There are other indications of malarial infection, such as leucopenia with relative increase of the large mononuclear leucocytes, enlargement of the spleen, and anaemia. These are only of relative value. Their absence is strong evidence against malaria, but their presence, seeing that they occur in other tropical diseases, does not prove the presence of malaria. They are not absolutely diagnostic in the same sense as are the three tests I have just mentioned, and need not be further considered.

The most important clinical test of malaria is *periodicity*—the periodic recurrence of the febrile or other phenomena. Practically all fevers, whether malarial or not, exhibit a periodicity. In tuberculosis, in typhoid, in sepsis, and so forth, there is a regular evening rise and morning fall of temperature, often quite as marked as in malaria. There is very definite quotidian periodicity. Quotidian periodicity is therefore not peculiar to, is no diagnostic mark of, malaria. We do meet with quotidian malarial fevers, especially in malarial countries. But quotidian periodicity, if taken alone, does not justify a diagnosis of malaria. So far from doing so, it is actually misleading. It is perhaps the most frequent cause of erroneous diagnosis in tropical patients. This you can readily understand. A patient from India, for example, comes to you with a story that every afternoon he has a shivering fit followed by a rise of temperature to 103°, and this again after some hours by a drenching sweat. He may mention no other symptoms. You may be in a hurry. You plump for malaria, and you prescribe quinine. The patient does not improve. You make a careful physical examination, and you discover signs of tuberculosis, or of liver abscess, or of some other form of visceral disease.

Quotidian periodicity, therefore, should be absolutely ignored in most cases as an indication of malaria. The periodicity characteristic of malaria, and absolutely diagnostic of that infection, is either a *tertian* or a *quartan periodicity*. These you find in no other condition, and are sure indication of malaria. The only circumstance in which quotidian periodicity may be a help in diagnosis is when the recurring fever sets in very late in the night, say after midnight, or before 12 or 1 o'clock during the day. Such a time for the commencement of a daily fever is almost peculiar to malaria.

The quinine test for malaria has usually been applied more or less intelligently before the case comes under the observation of the consultant. It is reliable if properly applied. Rarely does a malarial fever, in this country at all events, resist adequate dosing with quinine. Ten grains two or three times a day is almost sure in forty-eight to seventy-two hours to tell us whether we are dealing with malaria or not. But in employing this test we must be sure that the quinine is given properly, and that it is absorbed. Very often the quinine is given in adequate dose, but in some insoluble form, as in coated pill, flinty tabloid, or insoluble sulphate. In catarrhal conditions of the stomach given in any of these forms the

drug may not be dissolved, much less absorbed, and cannot therefore be regarded as efficiently testing for malaria. When it is of importance that we should be certain of its action, quinine should be given in solution, or, in highly catarrhal or irritable conditions of the stomach, intramuscularly in doses of 7 to 10 grains. If no impression is made on a fever by quinine given in this way, do not blame the drug; revise the diagnosis.

Even more reliable than the clinical or the therapeutical tests of malaria is the microscopical test. If the malaria parasite or its product—haemozoin, or melanin, as it is usually called—is found in the blood, diagnosis is sure. The parasite of malaria is necessarily present at one time or another in the course of all malarial infections; it is always present in the visceral blood, nearly always in the peripheral blood, and, given certain conditions, can be readily demonstrated in the latter. It is necessary, however, to secure these conditions. In the first place the patient must not be under the influence of quinine, in the second place the person who searches for the parasite must know his business. Even a small dose of quinine—one, perhaps, quite insufficient to check the fever—may cause the parasite to disappear temporarily from the peripheral circulation. The possession of a microscope, and even skill in other departments of microscopy, do not always imply ability to recognise the malaria parasite. To do so satisfactorily requires experience—special experience—and long training. It is not a difficult matter, but, as with everything else, you must know how to set about it, and be familiar with the fallacies. It would be a comical list were I to enumerate all the various objects that have been brought to me as specimens of the malaria parasite.

I would warn you, therefore, to be careful about accepting a diagnosis of malaria from an inexperienced microscopist, but I would encourage you to have absolute confidence in the positive diagnosis, and in ninety-nine cases out of a hundred in the negative diagnosis of malaria from an experienced and conscientious microscopist.

Liver Abscess.

Assuming that we have to deal with a tropical fever and that by one or all of the tests I have enumerated we have excluded malaria, the question comes to be, which of the several tropical fevers I have mentioned are we dealing with?

Is the case one of liver abscess? The first and all-important question we put is—has the patient had dysentery or diarrhoea? If so there is, to say the least, strong presumption in favour of such diagnosis. We search, therefore, for local signs, for enlargement of the hepatic area, especially upwards, for local pain, oedema, or even redness. We inquire as to anaemia, progressive emaciation, for irritability and depression of mind; we look for a muddy complexion; we inspect the stools, looking for slime or other indications of a former or an existing dysentery; we inquire for a dorsal or right dorsal decubitis, for shoulder pain, and we make a count for the white corpuscles in the blood—a leucopenia being against, a leucocytosis being in favour of, liver abscess. Finally, if the symptoms are reasonably suggestive we explore the liver under chloroform, being prepared to operate at once if abscess is discovered.

Mediterranean Fever.

We may suspect Mediterranean fever, more especially if the patient has come from Malta, although this disease is by no means unknown elsewhere—as in India, China, and even in Central Africa. The points in favour of a Mediterranean fever diagnosis are an undulant type of the fever, profuse sweats, the occurrence of marked rheumatic pains or of orchitis, and the absence of indications of other disease.

Apart from the symptoms mentioned the evidence for this fever is principally of a negative nature. The fever may assume all sorts of characters. Often it is undulant in type, but as often it is distinctly intermittent and quotidian, often of a low continued type, often a medley of all of these. The serum test is reliable under ideal conditions, but my experience of it in London is the reverse of favourable. When I employ it I usually send the blood to two different laboratories; as often as not I get "positive" from one and "negative" from the other. So I do not trust it here, although, where fresh cultures are obtainable, it is quite as trustworthy as the corresponding test for typhoid, and even more delicate.

Kala-azar.

We have a patient from India, from China, from the Soudan, or from North Africa. He has a chronic fever, his spleen reaches to near his umbilicus, and his liver is very much enlarged. He has been ill for months; he is anaemic; his tongue is clean and his appetite and digestion are good; he has taken quinine by the pound, and he is gradually going downhill. Probably that patient is suffering from kala-azar—the disease produced by the Leishman body. To make sure of the diagnosis we study the fever chart—a four-hourly one; very likely we note that there are two distinct rises of temperature in the twenty-four hours. We examine the blood; there is a very marked leucopenia, more marked even than in malaria, and there is a relative increase in the large mononuclears. Possibly, though this is not likely, we may find a Leishman body or two, if we search long enough, in the white blood corpuscles. In the presence of such a fever and such a history we are entitled to puncture the spleen or liver and to search for the Leishman body in the juice or fragments of pulp so obtained. Such a procedure is not free from risk and must be done carefully, aseptically, and with a dry needle and syringe. I say "dry needle and syringe," for if a trace of moisture be present in these it will, by endosmosis, so distort the parasites that, though present, they may be hard to recognize. Of course, one must be familiar with the technique for their demonstration and also with the details of the structure of the parasite, for it is exceedingly minute and might be mistaken for a micrococcus or a blood platelet.

Trypanosomiasis.

The patient comes from tropical Africa. He complains of irregular fever, of great physical and mental lassitude, headache perhaps, tenderness of the limbs when he knocks them against any hard body. You suspect trypanosomiasis. You strip him and inspect his skin. You see great patches of erythema, many inches in diameter, usually having a ringed appearance and looking slightly puffy; you palpate the glands in his neck, axilla, or groin, and you find that some or all of them are enlarged—perhaps only slightly enlarged. The pulse, as a rule, is abnormally quick, and easily excited. That patient is almost surely the subject of trypanosomiasis, and may die of sleeping sickness. Examine his blood with a sixth objective, examining it especially during one of the recurring attacks of fever, and you are almost sure to find the trypanosome. It will not be found in every field of the microscope, and you may have to return to the hunt several times, but in the end you are almost sure to find it. If you fail to find it in the blood, puncture with a hypodermic needle one of the enlarged cervical glands, and examine the lymph so obtained; in it you have even a better chance of finding the parasite. The blood count is very similar to that of kala-azar.

Relapsing Fever.

The patient comes from India, from tropical Africa, from North Africa, or even from Gibraltar. He tells you that he has attacks of fever, perhaps violent fever, regularly about once a fortnight; that the individual attacks last from three to five or six days, that they subside nearly as suddenly as they begin, and that he is quite free in the interval. He may have had three or four or even eight or nine such attacks. What are they? The blood is negative for malaria; there is no marked leucopenia. Examine the blood during one of the fever paroxysms, and probably you will find the spirochaete of relapsing fever. In the African variety it takes some looking for. If you find it diagnosis is established. Such cases I have seen more than once in recent years in London. They were imported from Africa, from Gibraltar, and from India.

Elephantoid Fever.

Another patient may tell you he has attacks of violent fever coming on at irregular intervals of weeks, months, or years, that the attacks last for two or three days, and may be attended with severe rigor, delirium, high temperature, and be followed by profuse sweating. If he comes from the West Indies, particularly from Barbados, he will call this disease "fever and ague," but it is not

fever and ague as we understand it. It is not malaria but elephantoid fever for the most part, and if we inquire as to the occurrence of inflammation and cellulitis of limb, scrotum, or acute lymphangitis, we are sure to find that such is the case. The patient is suffering from elephantoid fever, and is or has been the subject of filarial invasion.

The possibility of these various and very different infections should always be present to the diagnostician when he is called on to treat a tropical fever in this country.

Multiple Infections.

I began with a word of warning; I shall conclude with another word of warning, and it is this: Do not infer because you have found in your patient's blood or elsewhere the malaria or some other parasite, that you have the complete and full explanation of the case. In tropical disease malaria is apt to complicate everything, so that multiple infection of patients is rather the rule than the exception.

When you find the malaria parasite the patient has certainly got malaria, but that does not exclude other infections. I have sometimes been "caught" in consequence of ignoring this obvious precaution. Some years ago I was asked to see a patient just returned from Portuguese West Africa. He was said to be suffering from fever and dysentery. He had dysentery sure enough, and his spleen was enormously enlarged. He had taken much quinine; as it seemed to irritate his bowels I stopped it. At my first visit he had no fever. I found nothing in his blood. I left instructions that I was to be sent for should he have an attack of fever.

Some days afterwards I was sent for, his temperature being over 103°. I took a slide of his blood, expecting to find in it the parasite of malaria. Judge, however, of my horror when, instead of the malaria parasite, there was an unquestionable trypanosome staring me in the face! After a few days the fever disappeared, and, with the fever, the trypanosome also.

A fortnight later there was again a return of fever, and I again examined the blood, expecting to find the trypanosome. I found no trypanosome, but I found plenty of tertian malaria parasites. And so the case went on, every now and again a fever spell with trypanosomes in the blood, and every now and again a fever spell with malaria parasites in the blood. By the peristent use of atoxyl and of quinine both infections were finally expelled from the circulation. The patient is now, I believe, quite well.

Last year I had in hospital a patient from an African colony who carried about with him the malaria parasite, the trypanosome, the *Spirochaeta pallida*, the filaria, besides an assortment of intestinal parasites, including *Ascaris lumbricoides*, *Trichiurus trichiurus*, and *Ankylostoma duodenale*—a veritable museum, which, as long as it remained with us, we appreciated very highly at the Tropical School. He could always supply us with a subject for demonstration or for a clinical lecture.

I fear my exposition of the subject has been very sketchy and inadequate; it is necessarily so in consequence of the time limit imposed on me. I trust, however, I have given you the leading points for reliable diagnosis.

COMMON MISTAKES IN OPHTHALMIC PRACTICE.*

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In casting round for a subject on which to write a paper which would prove interesting and useful, the idea came to me that I should formulate my impressions, gathered from twenty-five years of eye work, of the mistakes most frequently made by the medical men who have seen, and usually treated, eye cases before they came under my notice.

I use the word "impressions" because I have no statistics to give you. I do not commit to paper any mistake that I may think another man has made; but yet, when one sees, as one does see, a considerable number of cases wrongly diagnosed and indifferently treated, they in a way sort themselves and occupy separate pigeonholes in the recesses of one's brain. I should be sorry if this paper led any one to think that I pass a harsh judgement on a man who makes a wrong diagnosis on an ophthalmic case. I have lived too long and made too many mistakes myself to do this, and, moreover, I know very well the limited amount of experience in eye work that in the ordinary run of work falls to the lot of the general practitioner; and so, if any one finds in this paper a cap that he knows fits him well, let him not think that it is specially designed for his head, but rather consider that his head is fashioned on somewhat cosmopolitan lines, and is therefore capable of being fitted at the first ready-made and reach-me-down hat shop that he chances to enter.

Refraction.

The class of cases that provide the most numerous mistakes are undoubtedly refraction cases. One would expect this because refraction work forms such a large proportion of eye work, but I should think that, taking mistakes in this branch alone, they are quite in the proportion of 9 to 1—that is, that in 10 mistakes in eye practice 9 are due to bad refraction work. Nor is it astonishing that so many mistakes are made in this department, for while it has always seemed to me that constant practice at it is essential to its satisfactory performance, the public, and not a few of our profession, seem to consider that any one who sells spectacles is qualified to advise upon refraction troubles. When I occupied—as I did for twenty years—the post of assistant surgeon at the eye infirmary, where the bulk of the work is refraction, I always found that when I returned from my summer holiday my work took me half as long again as it was doing when I went away. Moreover, accuracy comes with speed, and you decide without hesitation such points as whether you shall give full correction in a hypermetrope, or whether it is worth while to give this child cylinders, or wise to give that myope a second pair of spectacles for near vision. These, however, are minor points, though they have oftentimes an important influence upon the reputation of the man whose work is bettered. The gross mistake, and the one which one most often sees, is where ciliary spasm in a hypermetrope is treated with −2 D. spectacles or −1 D.

The type of this is a young dressmaker, or perhaps a tailor's apprentice, who comes complaining that after a few hours' sewing things become misty and her eyes ache. She gets some relief by holding her work nearer to her eyes; but now this manœuvre fails to relieve, and she is sure she needs spectacles. You test her, and find that she can read perhaps $\frac{6}{12}$ distant vision. You try her with a −1 D., and she says, "Oh, that's lovely; that's what I want"; or "Oh, yes, the print is beautifully clear." You provide her with the −1 D. or −2 D., whichever she sees best with, and she goes away seeing better than she has done for months, while you proceed to your next patient with the satisfactory feeling that "that is a good case." Next day your patient goes to work with a light heart, and finds everything very nice for a few hours; then the eyes again ache and smart. She thinks that they are not yet quite recovered from the bad treatment to which she subjected them before she obtained the glasses from you, and perseveres with them. But she finds that the aching returns at an earlier hour each day, and that her headache, which used to pass off when she left work, now persists all through the evening, and that only sleep, and even that not always, cures it. She then seeks other advice, is put under atropine, found to have hypermetropia, given her proper correction, and is thereafter comfortable, and wonders why you ever gave her those spectacles, which make everything look so tiny. The explanation of course is that you were deceived by the ciliary spasm. She came to you on account of this spasm. Her ciliary muscles, irritated by months of overwork in focussing correctly in a shortened eye had got to a condition of "tonic spasm" and over-accommodation, producing temporary short sight. You had easily corrected this short sight, but by doing this had added to her hypermetropia by precisely the strength of the concave glasses you prescribed. This led to greater efforts of accommodation, and to results which neither the eyes nor the patient could possibly put up with.

*Read before the Devon and Exeter Medico-Chirurgical Society.

Always, then, be exceedingly chary of ordering low concave glasses for anyone under 25 years of age, unless you have been able to ascertain definitely by the use of atropine that it is NOT *a case of hyermetropia with ciliary spasm.*

Squint.

Closely allied to this condition is that of internal squint in children. We so often get cases of bad squint brought to us with the history that it came on many months or even years ago; and, when we inquire why the parents did not see about it sooner, the reply usually is that "the doctor said the child would grow out of it." Now I am very far off believing all that people tell me about their doctors and the opinions that they have given. I know full well, from personal experience of the way people have interpreted and distorted my own opinion, how extraordinarily inaccurate the ordinary man, and still more so the ordinary woman, is in these matters; but this is such an oft-told tale that I feel sure the opinion is frequently given.* There is also some truth in the statement that the patient will grow out of it. "May" grow out of it would be quite true as far as it goes, but the whole truth would be "May grow out of it but with grievous loss of sight in the squinting eye and probable loss of binocular or stereoscopic vision." An opinion which causes any delay in the treatment of a squint in a child is hopelessly wrong and should never be given. For all practical purposes squint in growing children is always the result of refraction error. The exceptions are, in my experience, so few as to be negligible for the purpose of this paper, and the exceptions are usually caused by some lesion which is obvious and difficult to miss, such as corneal opacity. The vast majority of these cases of squint are convergent and when they are convergent they are associated with hypermetropia. When divergent they are usually due to myopia, or not infrequently to something which is rendering the diverging eye useless and so depriving it of the normal stimulus to move concomitantly with the other eye.

Let me briefly remind you of the physiology of accommodation and the supposed cause of converging squint; but first let me say that the last annual report of the Eye Infirmary shows that we had 97 cases of converging squint during the year and 10 of diverging; and of those 10 it is probable that not more than half were due to myopia.

As a working theory of the etiology or physiology of concomitant converging squint, Donders's is as good as any, and I can give you the outline of it in a few lines.

1. There is hypermetropia, that is, a short eye.

2. The short eye requires more accommodating power to focus objects on the retina than the normal or long (myopic) eye.

3. Convergence of the eyes is always associated with focussing. You will remember that the normal eye at rest is accurately focussed for distant vision. When objects nearer the eyes are looked at the internal recti converge the eyes so that they look at the desired point. Focussing—that is, increasing the convexity of the lens—also becomes necessary for a clear image to be projected upon the retina. Thus, convergence and accommodation are always associated, and so it comes about that convergence stimulates accommodation and increases it.

4. A hypermetrope of 2 dioptres has to be always accommodating to that amount to see distant objects clearly, and usually the ciliary muscle, which does the accommodating, manages it all right; but if the child gets some debilitating disease, or if anything occurs to weaken its ciliary muscles, convergence is brought into play to stimulate accommodation. Suppose, for example, that this hypermetrope wants a clear image of an object 30 ft. away. He converges to a point, say, 20 ft. away, and so excites the required amount of focussing. But if both eyes converge to 20 ft. neither will be directed towards the object at 30 ft.; and so it comes about that one eye is steadied by its own external rectus so that it looks at the desired object, while the other eye does convergence for both and so comes to be looking at only 10 ft. There you have the squint. One eye, the better one, is fixing the object to be seen, and the other is providing the necessary stimulus for accommodation by excessive convergence. We now come to the serious part of the business. It is obvious that the child will, the first time he performs this manœuvre, see double, and so it soon comes about that the image of the converging or squinting eye is obliterated, and thus you get in most cases—

5. *Amblyopia* or impaired vision in the squinting eye. I will not even mention the many theories advanced to account for this. It is sufficient to say here that it does occur, and occurs so rapidly that some authorities think that the amblyopia is the predisposing cause of the squint, instead of the squint causing the amblyopia. Amblyopia means loss of sight, and it also means, if it is present to any important extent, loss of binocular or stereoscopic vision; and so I urge it upon you that at the first sign of squint you see that proper treatment by glasses is at once adopted.

All the treatment that is required at an early stage is correction of the hypermetropia by suitable glasses, and an operation for concomitant squint ought never to become necessary.

Ocular Headache.

One does not see nearly as many headaches from this cause overlooked as one did fifteen years ago. Medical men and the public have become thoroughly alive to the fact that this is a frequent cause of headache; but it is worth remembering that slight errors of refraction more frequently cause headache than serious errors. This is probably due to the fact that people with serious errors have them corrected early because they are aware that they cannot see properly.

Foreign Bodies.

Passing now from refraction troubles to actual pathological conditions, I will first just mention that minute foreign bodies in the cornea are a not infrequent cause of severe neuralgia in the forehead and temple, nor are these foreign bodies always easily discovered.

A man came to me recently with a story of frightful attacks of neuralgia, for which he had been treated by his doctor for a month, with no good result. He considered that the neuralgia was in some way due to his right eye, because bright light was the chief exciter of the pain. The attacks were becoming more frequent and more severe, and quite incapacitated him for his work. He could not remember anything getting into his eye, and the eye looked quiet and normal, save that there was slightly excessive lacrymation and a very contracted pupil. I suspected some corneal trouble and had herpes in my mind when I examined the eye, but, after a careful and minute search with a lens, I found two minute foreign bodies. They were very difficult to find and see, but their removal cured his neuralgia, though not immediately. I saw him a fortnight after, and he told me that he had had a few attacks, all of them shorter and less severe than formerly, but none for four days past, and he considered that they were gone for good. As I have not had another visit from him, I feel sure that he is cured.

There are, somewhat rarely, cases in which a foreign body has got into the upper sulcus of the conjunctiva, where it is reflected from the orbit on to the eyeball; these are easily missed, and it is not sufficient merely to evert the tarsal cartilage and look for the body on its inner surface. With a bent probe or a spatula you should, after everting the lid, lift it off the eyeball and look carefully along the whole length of the upper sulcus. Eyelashes are specially prone to lodge here and cause irritation with mucopurulent secretion.

Corneal Ulcer.

I now come to a more serious group of cases in which eyes are often lost for want of careful and vigorous treatment at an early stage. Ulcer of the cornea, with hypopyon, following an injury which is often very slight. Almost invariably these cases arise among the poor, underfed, and hard-worked labourer, and in my experience from one of two causes. The man has either been stone-breaking and his eye hit by a chip of stone, or hedge-trimming, when it has been flipped by a twig or scratched by a thorn. The apparent injury may be so slight as to elude detection even with a corneal microsope, but the eye is usually painful, angry-looking, and watering. If you do detect anything by careful examination, it is a small scratch, abrasion, or cleanly-incised wound, the latter from a sharp chip of stone.

Many men err from not treating this apparently slight injury with sufficient respect. They give a boracic lotion

*In the discussion following the paper Mr. Stirk, the Medical Inspector of School Children for Exeter, said that he could corroborate this statement, that parents of squinting children had often told him that doctors, consulted about the squint, had said "the child will grow out of it."

and perhaps some weak cocaine drops for the pain, and think that the eye will be all right in a day or so when the cut or abrasion has healed. A great many eyes are thus sacrificed every year. We had 20 such cases at the Eye Infirmary last year, and I doubt if one of them recovered with any useful vision, and I am sure that they provided a proportion of the eighteen eyes which were excised during that time. Such an eye should be treated as though it were inoculated with a virulent septic organism, as indeed it probably has been.

My advice to you is to send such a case to the Eye Infirmary at once. There is no money to be made out of them, because they have no money; there is no credit to be got from them, because if they get well they say that it was such a trifling injury that "of course it got well"; and if it does badly they say, and with some truth, "It was your fault." I always insist, when these cases come to me first-hand, that they shall come into the Infirmary. They require most careful nursing, antiseptic treatment, rest, and good food, and I cannot recall a case that has "gone wrong" when placed under these conditions. On the other hand, they go home with their bottle of boric lotion, which they pour into a dirty saucer, sop up with a not too clean cloth or rag, and squeeze into the eye with thoroughly septic fingers, and the eye does not get better. Slowly the cornea gets hazy with the hosts of leucocytes which muster to limit and destroy the invading and multiplying host of germs. The battle-field becomes a mortuary for the destroyed blood cells and germs, and this mortuary we recognize as a tiny yellow spot in the cornea—a minute abscess, which slowly, and day by day, grows larger. It not only loosens and destroys the surface epithelium, forming a shallow ulcer, but it penetrates inwards and perforates the inner, Descemet's, membrane, and the highly septic pus is then in the anterior chamber, to the bottom of which it gravitates as what we call hypopyon.

The local treatment which I adopt in the early stage of these cases is a drop of atropine, cocaine, and quinine. The atropine dilates the pupil before iritis sets in—a very good start. The cocaine soothes the pain, and the quinine is an efficient, sufficient, and un-irritating antiseptic. I also use a little yellow oxide of mercury ointment, and these, together with rest, good food, and *thorough*, frequent irrigation of the eye by a good nurse, are means which I find effective, sometimes even in cases which have reached the stage of abscess, and even slight hypopyon. If the case is a bad one, or threatens to be so, I cauterize the ulcer freely with the electric cautery, let out the hypopyon by an incision in the corneal margin, and thoroughly irrigate the anterior chamber with 2 per cent. boric solution or with normal saline. I am getting to use the cautery earlier and oftener in these cases, because I am convinced that the resulting opacity of the cornea is far less dense than is that which follows the natural cure.

Therefore, in cases of corneal trauma, especially from stone-breaking or hedging, watch with care and treat with vigour and precision. If possible, send them to an eye hospital for skilled nursing, rest, and feeding. If the case does well, a week or ten days in hospital will cure it; if it does badly, it will have been placed under the best conditions, and will be under treatment for many weeks.

Irido-Cyclitis.

Acute iritis is not often overlooked, but the low plastic type of irido-cyclitis is often most inefficiently treated, because its seriousness is not appreciated. I have had several such cases in the last two or three years, which have been mismanaged before they came to me, with vision reduced to less than $\frac{6}{60}$, with pupils not properly dilated, and so forth. Many are misled by the apparent mildness of the trouble. The eye is only very slightly inflamed, scarcely pink. There is absolutely no pain, and usually the only complaint is that sight is failing. On examination you may find that the iris does not react to light, or only very sluggishly. After atropine, you find that it has dilated either irregularly or not at all. Perhaps, if you are early enough, it dilates regularly but not fully, and you see spots of uvea on the lens. If you look at the fundus you find that the view is not clear, because there are cobwebby opacities in the vitreous; and, finally, close examination of the cornea shows you a few or many minute pin-point specks on its lower segment—keratitis punctata. Such an eye is the seat of a very nasty and intractable disease. It will take months, running very likely into years, to recover, and will almost certainly suffer visual loss as the result of the inflammation which permeates it. The mistake which is usually made is that the iritis is recognized and treated, very likely correctly, with atropine, salicylates, iodide of potassium, or what not, and that the case is given up as cured when active iritic symptoms have passed. Men forget that the iris is, though physiologically a separate organ, anatomically continuous with the ciliary body and choroid, so that inflammation can, and does, spread backwards by continuity of tissue. In a case of simple iritis I am always very diffident about leaving off atropine, and watch the case anxiously for a month or two after omitting it from the treatment.

Do not forget that the iris is only the anterior termination of the uveal tract, and that an inflammation of it may spread back and involve the choroid, retina, and vitreous. Look out for keratitis punctata.

It may impress it upon your minds if I tell you that this condition is practically the same as that which you all know and dread as sympathetic ophthalmia. One sees very few cases of that nowadays, and there is no one here who would not at once recognize it if it arose in his practice after injury to the other eye. That is sympathetic irido-cyclitis, and what I have been speaking of is simple or, if you like, idiopathic irido-cyclitis, and is often as formidable a disease.

Glaucoma.

I feel that you will expect me to say something about the diagnosis between iritis and glaucoma, and at the same time I am conscious of being quite unable to condense the subject into a paragraph. The mistake is still made of using atropine for a glaucomatous eye, and is made in cases in which ignorance is not only the excuse for it, but the reason. A typical case of glaucoma in the acute or subacute stage is like nothing else. The suddenness and severity of the onset, the hardness of the globe, the partial dilatation of the pupil and its immobility, the shallow anterior chamber, and the steamy cornea, together with the rapid loss of sight, form a very perfect clinical picture. In iritis the onset is more gradual, the tension is but little if at all increased, the pupil is contracted and immobile, the anterior chamber is not diminished in depth, the cornea is not hazy, and the loss of vision is neither rapid nor, at first, great. But these are the easy cases to decide upon. One occasionally sees cases which give rise to great difficulty in diagnosis, and I believe that when you are in such a difficulty the best thing you can do is to order cocaine drops for the relief of pain, and send the case to a specialist at once.

I remember once having to do iridectomy for an acute glaucoma produced by the application of a mydriatic, by one of the best eye surgeons in England, for the purpose of investigating the condition of the lens. He suspected and found cataract, but he did not suspect chronic glaucoma, which was undoubtedly present, and which was exacerbated by the temporary dilatation of the pupil. Men occasionally, and at some risk, use a mydriatic in middle-aged and older people for the purpose of examining the interior of the eye for some unexplained loss of sight. Before doing this they should satisfy themselves that chronic glaucoma is not the cause for which they are seeking, because, if it is, they are running a very great risk of producing an acute attack.

Before using a mydriatic in a person of middle age or over, satisfy yourself that there is neither subacute nor chronic glaucoma present.

Chronic glaucoma is an insidious disease and a dangerous trap for which you should be always on the alert. I have recently seen two very sad cases of this disease in which total blindness was present when they came to me. The cases had passed, by months or years, the period when good could be hoped for from treatment. When a patient past middle age comes to me complaining of failing sight and with a normal looking eye, if correction of the refraction does not produce normal vision I think first of cataract and next of chronic glaucoma. The thing to bear in mind is that the disease is usually far advanced when the vision has become seriously affected, and that there is no time to be wasted in improving the general health in the hope that the sight will improve. The diagnosis in the early stages when treatment may avail to save sight is not easy,

and when the diagnosis is plain and the case a typical one' such as textbooks describe, treatment is too often of no avail. It is not very uncommon to find a case of this disease in an advanced stage but able to read $\frac{6}{6}$ and 1 J., but when one examines the field of vision one finds it contracted to very small limits. This is, of course, because the intraocular pressure operates first on the periphery of the retina, where the vascular supply is more easily compressed than it is in the central portion.

It is difficult to give any "tip" for the diagnosis of chronic glaucoma. It always attacks both eyes, I think, but not together, so that if one eye has been lost from it you may expect it in the other. If you can make out that the tension is increased, you are safe in diagnosing it; but you are not safe in saying that a case is not chronic glaucoma because there is no increase of tension, because the tension varies a great deal in some cases, though it is probably increased at times in all. Nothing less than a careful routine examination of the eye and its functional power will suffice for making a diagnosis in an early stage.

Cataract.

There is one silly little mistake which I have made dozens of times, but have not communicated to the patient, in diagnosing cataract by focal (or side) illumination only. In some elderly people the hardened lens reflects the light in such a way as to give the pupil a milky appearance, which is not unlike the pearly reflection of a mature cataract. There is not necessarily cataract present in such a case, and the diagnosis is not good unless you can confirm it with the ophthalmoscope. With a plane mirror at the usual distance for indirect examination throw a light through the pupil on to the fundus. If cataract is present in the pupil you will see the red reflex interrupted by black streaks or dots or spots; or, better still, scrutinize the lens by the direct and close method, and with a + 25 D. lens in your ophthalmoscope. That will show you the most minute traces of lens opacity, but requires some expertness. The former method is quite sufficient for all practical purposes, and extremely simple.

CONCLUSION.

I have not exhausted the category of mistakes, and I have not mentioned the question of fundus conditions which cannot well be discussed until they have been demonstrated.

It was not my purpose to deal with the rarer conditions of disease or traumatism, or to exhaust the possibilities of the eye as a field for making mistakes in. I have contented myself, and I expect tired you, with the *common* mistakes in ophthalmic practice.

THE VALUE OF SOME LACTIC ACID FERMENT PREPARATIONS FOR INTESTINAL THERAPY.

BY

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and

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DURING the course of an investigation upon faeca[1] organisms it was found necessary to determine the inhibitory action of certain types of lactic acid bacilli. Some of the bacilli were isolated from ten commercial lactic acid ferments, and it was suggested to us that a statement of our observations might be of interest to those who use these ferments in everyday practice.

The majority of these ferments are sold in the form of dry tablets, obtained by inoculating the milk with an organism, evaporating, and then compressing the residue, or by mixing a dried culture of the organism with a suitable excipient. These tablets are directed to be added to milk which has been boiled for a short time and then allowed to cool; the milk is then to be kept at blood heat for six to eight hours. After this period of incubation the milk is said to be sufficiently "soured" for therapeutic uses. In a few cases it is advised to dissolve the tablets in sweetened water before consumption. The object of these procedures is the introduction of lactic acid bacilli into the ileum and colon in order to inhibit the action of putrefactive bacteria.

The results of the simple experiments we have carried out tend to show that the ferments at present on the market do not achieve the end in view, and they suggest that until there is a decided improvement in the processes of manufacture the dangers attendant upon the use of these tablets outweigh their benefits. Whenever the treatment is specifically indicated it would be well to obtain young, active, and specially adapted (aërobic and anaërobic) cultures in a fluid medium from local public health or other laboratories, and to determine the efficacy of the organism by bacteriological examinations of the faeces. With suitable media and precautions, such a proceeding need not involve more than the outlay of a few shillings, and the ultimate expense will be considerably less than that occasioned by the longer haphazard medication with inert or inefficacious material.

Development of Acidity.

Since the ferments are used in connexion with milk, we first determined the acidity developed in raw, pasteurized, and sterilized milk during incubation at blood heat. It will be seen from Table I that in pasteurized and sterilized milk a considerable amount of acid is formed, and that it is necessary to sterilize the milk on two successive days in order entirely to free the milk from micro-organisms.

TABLE I.—*The Acidity Developed in 25 c.cm. of Milk during Incubation in Sterile Flasks at 37° C. (98.5° F.).*

	Acidity when received. Decinormal Alkali.	24 hours. Decinormal Alkali.	72 hours. Decinormal Alkali.	96 hours. Decinormal Alkali.
Raw milk	12	25.0	96.0	—
Pasteurized milk	6	11.5	19.5	21.0
Pasteurized milk, the acid produced each 24 hours being neutralized	6	11.4	30.9	63.4
Pasteurized milk heated to 100° C. for 1 hour...	6	13.0	29.0	36.5
Pasteurized milk heated to 100° C. for 1 hour on two successive days	6	—	—	—

These figures emphasize the observations of Robertson and Muir,[1] who found that:

Milk pasteurized at 70° C. for 30 minutes killed off cocci, lactic acid *coli*, *proteus*, and ordinary pathogenic bacilli.
Milk heated to 100° C. for 1 to 1½ hours killed off anaërobic spore-bearing bacilli, including *Bacillus enteritidis*.
Milk heated to 100° C. for 2 hours killed off *subtilis* group and aërobic spore-bearing bacilli responsible for summer diarrhoea.

As it rarely happens that the domestic heating of milk ensures complete sterilization, it is obvious that the addition of "ferments" to milk partly sterilized induces considerable antagonism between the added bacilli and the unkilled organisms, which, freed from the restraint of the ordinary milk bacteria, are multiplying more rapidly than usual. In summer time some of these resistant organisms possess pathogenic properties, and their free growth is not without danger. If this form of treatment demands the "souring" of milk, it is obvious that the process should be carried out with new milk collected under cleanly conditions. The slight bactericidal properties of fresh milk may then act upon undesirable organisms and the lactic acid bacilli outgrow other bacteria. As this, however, requires several days for completion, we are forced to the conclusion that the conditions of the collection and sale of milk in this country make it an untrustworthy vehicle for the administration of this medicament. It is better, apparently, to discard milk and to administer the cultures in a liquid sugar medium.

I.—*The Acid Contents of the Tablets.*

It appeared to be worth while to determine the acidity of each tablet in order to ascertain the activity of the medium from which the tablet was prepared. The figures

obtained show considerable variation (vide Table II). The smaller amounts are from those tablets which consist of a mixture of dried bacilli and sugar only.

TABLE II.—*The Acidity Obtained by Dissolving the Tablets in 25 c.cm. Distilled Water in Terms of Decinormal Alkali.*

	c.cm.
Sample No. 7*	0 5
,, No. 4	0.4
,, No. 6	0.05
,, No. 8	0 2
,, No. 5	1.8
,, No. 1	0 5

*The numerals are adopted for convenience only. They have no relation to the order in which the preparations are cited.

Morphologically the appearances of the organisms differ widely. Some tablets contain bacilli which accord with Metchnikoff's classic descriptions: in other preparations diplococci, sporulating bacteria, and streptobacilli, or yeasts are also present.

Speaking generally, there is no growth on McConkey's medium, but luxuriant cultures are obtained in peptone broth, nutrient broth, dextrin, glucose, saccharose, lactose, salicin, glycerine, and raffinose, and on nutrient agar. Sorbite, galactose, maltose, inulin, dulcite, and malachite green broth rarely act as suitable media. Nitrates are only reduced by one or two types and indol reactions are not obtained.

II.—*Variations in the Power of the Tablets in Each Sample.*

The power of the tablets may be ascertained by incubating measured quantities in a 1 per cent. lactose solution. Their activity should be determined by incubation in a lactose solution to which carbonate of lime is added in excess. The capacity of multiplication is another factor for estimation, and from our standpoint one which is of prime importance. These factors often show considerable variations, so that they must be severally investigated.

In Table III are recorded the "powers" of the tablets. It will be seen that there are pronounced differences between the samples examined, and between individual tablets from the same batch. This may to some extent account for the complaints of irregular "souring." In some instances the acidity developed after twenty-four hours is not greater than when the original tablet is dissolved in distilled water.

TABLE III.—*Variations in the Power of the Tablets of Each Sample. Estimations of the Acidity Produced in Milk by adding One Tablet to 25 c.cm. of Sterilized Milk or 1 per cent. Lactose Solution free from Carbonate of Lime (in Terms of Decinormal Alkali). Incubation Period, 48 Hours at 37° C.*

	Tablet 1	Tablet 2	Tablet 3	Tablet 4	Tablet 5	Tablet 6
Sample No. 5	2.0	0.5	0.6	0.4	0.4	0.2
,, No. 1	7.1	6.1	4.2	2.8	2.8	1.8
,, No. 8	0.3	0 3	0 2	0.2	0.2	0.2
,, No. 4	4.0	3.6	3.6	3.4	2.8	2.8
,, No. 6	0.4	0.3	0.3	0.2	0 2	0.2
,, No. 7	0.7	0.6	0 6	0 6	0.6	0.6
,, No. 2	3.5	3.2	2.6	2.6	2.4	2.1
,, No. 3	0.7	0 6	0.5	0.5	0.5	0.4

It may be well, however, to point out that the best acidifiers are by no means the best multipliers and that the amount of curd is not an index of the capacity of the organism to pass through the alimentary canal.

III.—*The Activity of the Ferments in Pasteurized, Partly and Fully Sterilized Milk, and in Lactose Solution.*

The figures given in Table IV represent the activity of the ferments. It will be seen that pasteurized milk without the addition of a tablet yields approximately the same amount of acid as that produced after the addition of the ferment. From Table V it appears that the ferments possess more power than the proliferating organisms of pasteurized milk. During the first twenty-four hours only three of the samples show any marked acidity; the others are not more acid than the pasteurized milk. Some of the ferments inhibit the action of the normal acidifying organisms.

TABLE IV.—*The Acidity Produced in 25 c.cm. of Pasteurized Milk by the Lactic Acid Bacilli after Daily Neutralization of the Acid Produced, and Incubation at 37° C.*

	24 Hours. Decinormal Alkali.	48 Hours. Decinormal Alkali.	72 Hours. Decinormal Alkali.
Pasteurized milk without addition of organisms	5.4	30.9	63.4
Sample No. 9 added to milk...	5.4	33.4	84.4
,, No 7 ,, ,, ...	5.6	27.1	72.1
,, No. 8 ,, ,, ...	6 6	31.7	70 7
,, No. 6 ,, ,, ...	5 6	26.1	64.1

TABLE V.—*The Acidity Produced in 25 c.cm. of Pasteurized Milk by the Lactic Acid Bacilli without Daily Neutralization. Incubation at 37° C.*

	24 Hours. Decinormal Alkali.	72 Hours. Decinormal Alkali.	96 Hours. Decinormal Alkali.
Pasteurized milk without addition of organisms incubated at 37° C.	5.5	13.5	15.0
B. lactis aërogenes	15.0	24.4	32 5
Sample No. 9	5.4	28.0	51.0
,, No. 7	5.6	21.5	45.0
,, No. 6	5.6	20 5	38.0
,, No. 8	6.6	25.5	38.0
,, No. 4	12.0	20 2	26.8
,, No. 2	8.5	24.2	25.9
No. 5	12 5	14.0	14.5
B. coli communis	7.0	10.5	14.0
Sample No. 1	5.0	13.3	13.2
,, No. 3	14.0	5.2	4.2

The manufacturers do not advise the use of pasteurized milk. According to the directions it is necessary to bring the milk to the boil—some go so far as to recommend the difficult task of keeping it on the boil for one hour—then to cool it, and after adding the tablets to keep it at blood heat for six to eight hours. In Table VI the results of an attempt to follow the instructions given are recorded, and they represent what would be obtained by a nurse or housewife. The figures show that the unkilled organisms are able to grow rapidly in the milk, and that the introduction of the lactic acid bacilli produces an antagonism leading to a minimal growth of both types of organism and a small amount of acidity. When inert, or almost inert, tablets are added to the milk, it is evident that the spore-bearing organisms of the milk have it all their own way, and as such bacteria sometimes act as intestinal irritants, the process cannot be considered as a safe one. Were it possible, however, for the "souring" to be obtained within six to eight hours this danger would be only trifling; but this time is far too short for the hibernating bacilli to regain their normal activity, and upwards of sixteen to twenty-four hours is the average period necessary. Table VII shows the conditions when the spores are all destroyed, and the tablets exhibit their maximal characters.

TABLE VI.—*The Acidity Developed in 25 c.cm. Pasteurized Milk Heated to 100° C. for One Hour and then Incubated at 37° C. after the Addition of Comparative Quantities of Various Lactic Acid Ferments.*

	24 Hours. Decinormal Alkali.	96 Hours. Decinormal Alkali.
Milk alone	13.0	36.5
Sample No. 6 added to milk ...	17.0	43.0
,, No. 7	13.5	46.0
,, No. 2	12.0	55.5
,, No. 9	12.0	50.5
,, No. 10	8.5	46.0
,, No. 1	6.0	63.0
,, No. 8	4.0	16.0

TABLE VII.—*The Acidity Produced by Lactic Acid Bacilli in 25 c.cm. Milk Sterilized at 120° C. for Fifteen Minutes on Two Successive Days. Incubation at 37° C.*

	24 Hours. Decinormal Alkali.	72 Hours. Decinormal Alkali.
Sterilized milk alone	—	—
Sample No. 4 added to milk ...	24.1	99.2
,, No. 2	23.0	53.2
,, No. 7	21.4	45.7
,, No. 9	10.5	21.6
,, No. 6	8.9	15.4
,, No. 8	10.4	14.6

IV.—*The Inhibiting and Antagonizing Action of the other Organisms present in Milk.*

We have already remarked upon the inhibitory action of the milk organisms upon the lactic acid bacilli. The following table points the moral. When *B. coli* are present in milk they reduce the activity of any added lactic acid bacilli. In this instance comparative quantities of *B. coli* and *B. acidi lactici* were added to a sterile lactose solution, and in many cases the acidity produced was less than that produced by the lactic ferments alone. We may fairly assume that with the ordinary "souring" of milk the conditions are more complex, and that it is too much to expect the dried bacilli to attain their dominating characters until the other organisms have developed a strong antagonism.

TABLE VIII.—*The Activity of the Lactic Acid Ferments in 1 per cent. Lactose Solution, and the Inhibiting and Antagonising Action of other Organisms.*

To 25 c.cm. of a 1 per cent. freshly prepared lactose solution ½ c.cm. of a twenty-four hours' growth of the organism in nutrient peptone was added. The mixture was then incubated at 37° C. (98.5° F.).

	24 Hours. Decinormal Alkali.	48 Hours. Decinormal Alkali.
Bacilli coli communis	0.1	6.0
Sample No. 2	3.0	21.5
,, No. 2 + *B. coli communis* ...	6.3	9.7
,, No. 5	0.60	4.0
,, No. 5 + *B. coli communis* ...	1.0	5.8
,, No. 1	0.3	12.0
,, No. 1 + *B. coli communis* ...	0.1	9.5
,, No. 3	0.3	4.5
,, No. 3 + *B. coli communis* ...	0.1	4.3
,, No. 4	0.2	10.1
,, No. 4 + *B. coli communis* ...	0.2	8.0

V.—*The Multiplication of the Lactic Acid Bacilli.*

During the passage of the lactic acid ferments into sugar and other media a good growth was invariably obtained in peptone water. Fournier[2] points out that with certain true lactic ferments the lactic acid output may exceed 100 per cent. in the presence of peptone, and this without giving rise to any simplified nitrogenous product, or to any putrefactive one particularly. It is evident, therefore, that peptone water is essential for the multiplication of the bacilli. Crithari[3] has recently observed that the lactic acid bacilli grow best in an acid medium, and Cohendy devised a medium composed of lacmus milk containing 3.5 grams lactic acid per litre. Palier,[4] however, working lately in Boas's laboratory, finds that gastric juice kills bacteria with ease, and considers that the lactic ferments are devitalized before they reach the intestine.

As the lactic acid treatment aims at intestinal therapy it seemed advisable to subject the tablets to the action of an artificial gastric juice. After some preliminary failures a medium was found which was comparable with gastric juice and yet contained stimulating pabulum. This medium later proved to be a very useful means of isolating the organisms from the dejecta, and a valuable form of enrichment. Table IX shows that a proportion of the tablets did not survive this test. The small amount of acid contained in these tablets (vide Table II) suggests that the organisms were not prepared from a very acid medium, and that, in order to safely navigate the gastric sea, the bacilli should be trained to appreciate an acid medium; in other words, the medicament should be a culture grown and administered in an acid broth.

TABLE IX.—*The Growth of Comparative Quantities of Lactic Acid Ferments in an Artificial Gastric Juice Media.*

Samples No. 9, 6, 10, 3, 2	Good growth
,, No. 7, 5, 4	Poor growth
,, No. 1, 8	No growth

VI.—*The Action of Aërobic and Anaërobic Faecal Bacteria upon the Lactic Acid Bacilli.*

Tables X and XI contain the results of the interaction of normal and pathogenic bacteria and the lactic ferments. It shows that very few of the preparations are sufficiently active to overcome the faecal bacteria, and that an acid medium is an important factor in the process.

TABLE X.—*Activity of the Lactic Ferments in Presence of Aërobic and Anaërobic Faecal Organisms.*

Measured quantities of the organisms and of an emulsion of faeces were mixed together and incubated at 37° C. for varying periods. Cultures were then made in acid and neutral broth, and the organisms plated on agar and McConkey's medium.

Sample No. 6.	48 Hours. Number of Colonies.	48 Hours. Types of Colonies.	96 Hours. Number of Colonies.	96 Hours. Types of Colonies.	5 Days. Number of Colonies.	5 Days. Types of Colonies.
Acid Broth.						
Nutrient agar	24	2	25	1	38	1*
McConkey's medium...	5	1	0	0	0	0
Neutral Broth.						
Nutrient agar	20	3	1	1	0	0
McConkey's medium...	26	2	0	0	0	0

* Sample No. 6.

Sample No. 2.—Three colonies (one type) after 5 days in acid broth.
,, No. 1.—No colonies after 5 days in either broth.
,, No. 8.—No colonies after 5 days in either broth.

VII.—*The Passage of Lactic Acid Ferments through the Alimentary Canal.*

It is a generally accepted statement that the lactic acid bacilli appear in the faeces about five days after being taken by the mouth, and that the total amount of faecal

bacilli is at once diminished, the lactic acid bacilli being easily demonstrable in the dejecta for some time afterwards. We find, however, that with suitable doses of enriched cultures accustomed to live under anaërobic conditions, and administered in a specific acid medium, there is no difficulty in demonstrating the presence of the bacilli in the stool passed the following morning.

It is not an easy matter to recognize the various lactic acid bacilli in the faeces, and only when we adopted the acid "gastric" medium referred to did we find the procedure at all simplified. By this means, however, the recognition is neither difficult nor tardy, and the practitioner is assured of a practical demonstration of the object he aims at.

These lactic acid bacilli are not in their natural habitat when transferred to the colon, and it is curious that their life in the intestine is about the same as it is in artificial media—namely, about five to seven days. This seems to be the period when another dose is indicated. The fact suggests that we must not expect these bacilli to become acclimatized to the intestine easily, and must regard them rather as temporary interlopers, our object being to allow the normal flora to regain their sway as soon as the objectionable putrefactive anaërobes are overcome.

Passage of Lactic Acid Ferments through the Alimentary Canal.

Tablets from the various preparations were taken by the mouth. When the organism appeared in the faeces the ingestion was stopped, and the faeces examined daily until the lactic acid ferment could no longer be isolated.

TABLE XI.

Period of Ingestion.	First Appearance in Faeces.	Disappearance from Faeces.
Tablet (1), Feb. 1st to 10th	No appearance	—
Tablet (6), Jan. 30th to Feb. 3rd ...	No appearance	—
Tablet (3), Jan. 30th to Feb. 1st. ...	February 1st	February 4th
Culture, Feb. 1st to 2nd	February 2nd	February 8th
Culture (6), Feb. 3rd to 4th	February 4th	February 10th

It only remains to make the deduction that even the best present commercial preparations are not sufficiently and regularly active for routine use, and that freshly prepared fluid cultures should be employed when lactic acid therapy is indicated. The activity and power of the organisms in producing acids cannot be taken as an index of their multiplication and inhibitory action upon other organisms, and it is probable that no one organism can be regarded as efficacious in every case. When an organism fails to produce the desired result, certain laboratory tests may indicate the selection of bacilli possessing other characteristics. It should also be borne in mind that the lactic acid therapy is only indicated when the putrefactive anaërobic organisms are present in the faeces in excess, and that without such a guide this form of medication may aggravate rather than ameliorate the intestinal conditions.

REFERENCES.

[1] BRITISH MEDICAL JOURNAL, vol. i, 1904. [2] Fournier, *Coombe's Intestinal Auto-intoxication*, p. 444, Rebman, London, 1909. [3] Crithari, *Comp. Rend. de Soc. Biologie*, 1908, p. 818. [4] Palier, *Boas's Archiv*, 1908, Bd. 14, p. 312.

MESSRS. HARVEY FROST, who are well known as the manufacturers of a very useful portable tyre vulcanizer, have issued a pamphlet, which they will present to persons interested, containing certain particulars of various motor tyres upon the market. No opinions are expressed upon their relative merits, but it contains some useful hints as to the management and repair of tyres. Specimens of all those mentioned can be seen at Messrs. Harvey Frost's, 27, Charing Cross Road, where they are not on sale, and therefore can be inspected and compared without any order being expected.

An Address
ON
MINING ACCIDENTS:
WITH
AN ACCOUNT OF THE USE OF OXYGEN IN A COALPIT ACCIDENT.

DELIVERED TO THE STIRLING BRANCH OF THE BRITISH MEDICAL ASSOCIATION

BY JAMES ROBERTSON, M.B., C.M.,

CLACKMANNAN; PRESIDENT,

GENTLEMEN,—I accept it as an honour to have been asked to address you, and I hope that what I have singled out of my scrapbook may be of interest.

COMPLETE DISLOCATION OF KNEE-JOINT.

In the following case there are three points to which I desire to call particular attention:

1. The free mobility of the limb at the knee-joint. One of the classical signs of a dislocation is no movement where there ought to be movement; in dislocation of knee-joint there is increased mobility, and mobility in every direction.

2. The floating patella, which simulated a patella in a case of acute synovitis with effusion; the difference being that upon comparison with the other limb the patella was 3 in. higher.

3. Was the entire absence of pain due to the amount of crushing and local stunning of tissue and nerves from the violence of the wrench?

J. M., a drawer, aged 20, was brought home from his work injured on February 19th. He stated that a hutch containing a load of coal—total weight 15 cwt.—was proceeding down an incline when it left the rail. He went in front to replace it, and when he had done so it ran away, catching his foot between the hutch and a sleeper, the toe of his boot being caught by the sleeper, his heel by the hutch; the hutch, moving on, carried his foot to extreme flexion, when the hutch broke and tilted upon his leg. He became helpless and was removed home.

Condition on Examination.

The limb was shortened and the region of the knee-joint enlarged; there were several bruises between the knee and ankle on the posterior aspect of the leg; the limb was freely movable in any direction at the knee-joint; neither crepitus nor any other sound elicited; there was no pain. Posteriorly the entire articular surface of the femur was felt, the rounded condyles and the notch between them. Anteriorly the patella was freely movable in any direction, and could be pressed down upon the anterior aspect of the femur. The rectus femoris was raised from the femur, and could be grasped easily with the fingers upon displacing the patella; the entire articular surface of the tibia could be felt; the cup-shaped depressions, with the spinous processes; the crucial ligaments could be felt torn; no pulsation could be felt in the tibial arteries at the ankle-joint.

Treatment.

I administered chloroform and set the joint by grasping the ankle with my right hand, placing the femur near the knee on my left thigh, and combining extension with flexion, the joint replaced itself with a loud snap. I again examined, and found the parts normal so far as the bones were concerned, the patella gliding normally over the condylar surfaces, and the replaced joint moving normally and without pain. The limb was wrapped in wadding and a posterior splint applied.

On the day after the accident the patient complained of severe pain round the ankle, and described it like a rope tied tightly there. He had been restless all night. The knee-joint was greatly swollen, and the patella floating, owing to great effusion into the joint; there was no pain, except upon pressure. The foot was bluish and cold, and superficial sensation was lost; deep sensation was present, but feeble; several patches of skin on the leg were ecchymosed, and there were three small blebs, containing dark serum, in the popliteal space. These I pricked and dressed; the foot was rolled up in flannel, and a hot iron, also rolled in flannel, kept at it; a saline purge was given.

On the third day the swelling in the joint was greatly reduced, the bowels had moved, and he had had a good night, but complained of sharp shooting pains occasionally passing up the leg from the foot.

On the fourth day the knee was normal in size and looking well; the dressings were removed, and movement begun. Dry gangrene was starting in the toes; all sensation in the foot was lost, but there was hyperaesthesia round the ankle-joint. The gangrene gradually extended from the toes to the foot, until the patient was removed to the Victoria Hospital, Glasgow, for operation seven days after the accident—February 26th.

During the first four days' residence in hospital the patient became febrile, and began to show the characteristic chart of septicaemia. The calf of the leg began rapidly to swell, and became boggy. This was incised on March 1st, when pus escaped, and at the same time the gastrocnemius and soleus muscles protruded out of the wound, showing that they had been torn at the time of the accident. The septic condition was the result of absorption of poisonous products from the gangrenous foot being carried up to the injured muscles of the calf, the bruised tissue and blood effusion being a suitable medium for the resultant abscess, the general septicaemia following.

The limb was amputated at the lower third of the femur on March 4th. The patient made a slow but good recovery, and is now working at the pit head, using an artificial limb with freedom.

Examination of Amputated Limb.

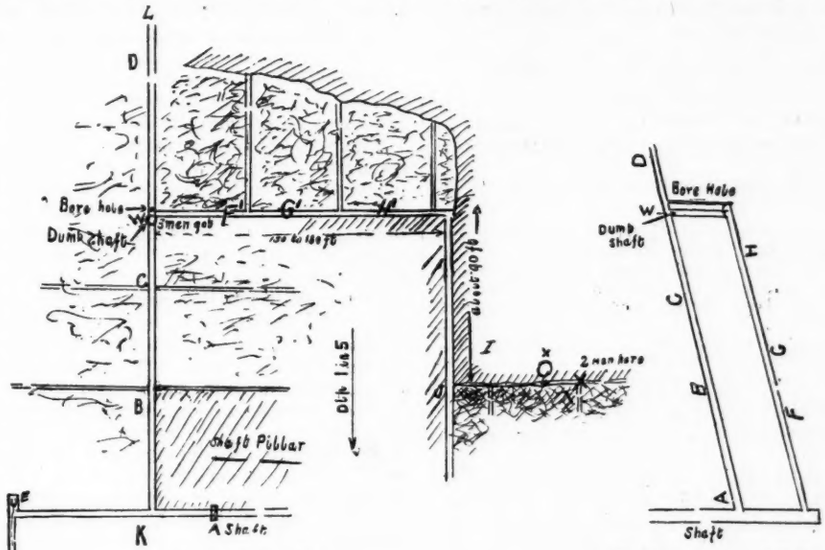
The knee-joint was found to be as I have described; the gastrocnemius and soleus muscles were torn at the thickest fleshy part, and there was a great deal of tissue bruising. There were no blood clots in the veins, and no signs of any injury to vessels. The foot was black.

I have seen the record of five such cases in England, and one in Scotland, and in all the cases gangrene of the foot resulted and necessitated amputation of the limb.

FRACTURE OF CERVICAL VERTEBRAE.

I have now seen several cases of spinal fracture; by that term I include cases of spinal dislocation, as it is impossible to distinguish between the two, when either is grave and involves pressure upon the spinal cord.

The spinal cord terminates at the lower edge of the twelfth dorsal vertebra, so that fracture of the lumbar vertebrae involves only the nerves, and when the pressure is removed paralysis usually disappears, but fracture of the dorsal or cervical, as a rule, not only causes pressure upon, but rupture of the cord, and in these cases death socner or later results. In three cases I have had of dorsal fracture death resulted during the third year. The higher the injury the more serious and the more rapid the case. In the following case the fracture was an exceptional and interesting one to study.



A, B, C, being in the upper coal (cherry seam).
F, G, H, being in the lower coal (splint coal), 30 ft. lower. E, Engine house.
Road to be made from J to X, where two men were, about 22 or 24 yards.
W, Dumb shaft to be sunk and bore hole put down, 30 ft. from cherry to splint seam, where three men were.
× Where oxygen was liberated. H¹, Where rescue party were passed in darkness.

J. M., an inspector, aged 59, going his usual rounds, approached a coal face, where the miners were sitting at rest. He also sat down in the miners' usual position, that is by extreme flexion of knee-joints, almost sitting on his heels, with his back against the side of the workings. While sitting there a large stone, weighing about 1½ cwt., shot out from the roof above him; its edge struck him upon the forehead, causing sudden over-flexion of the chin upon the chest.

Condition on Examination.

There was no external injury beyond a slight graze on the forehead. There was great mobility of the head and of the cervical region, in any direction, giving a feeling of looseness; there was general paralysis and anaesthesia up to the level of the fourth rib; from the fourth rib to the clavicle there was slight sensation; the arms could be moved with great difficulty, and sensation in them was impaired; above the clavicle sensation was normal. The only movement to be seen was movement of the head with pain and movement of the diaphragm. The ribs were fixed owing to complete paralysis of the muscles of respiration, even of forced respiration, the breathing was Cheyne-Stokes type, the pulse was of low tension and feeble, and the heart sounds weak. The seat of injury was at the sixth and seventh cervical vertebrae.

The man lived sixty hours, the pulse and heart showing progressive weakening, until death resulted from extreme lividity and a great struggle for breath. The bladder and bowels had to be relieved.

The interesting points of this case are:

1. The brachial plexus arises from the fourth cervical to first dorsal; the fracture being between the sixth and seventh cervical involved the major part of this plexus, hence the partial paralysis of the arms and the diminished sensation, so that while movements of arms existed, they were a terrible burden (as the man expressed it), the nerve power of the fourth and fifth not being sufficient to carry the weight of the arms. This experience makes one think of the relation of the nervous system to the physical frame—the power of the nervous system, and the weight of the physical frame. If the nervous system of the individual is in proper working order, the physical frame has no conscious weight; if the balance is upset, then the physical system is a conscious burden.

2. Breathing was carried on by the diaphragm alone; one could watch the abdomen rising and falling as the man gulped the air, but the chest was absolutely still. Here the pneumogastric and phrenic nerves did their duty. The pneumogastrics, arising from the medulla and passing direct from the skull into the neck, escaped injury. The phrenics, which arise from fourth and fifth cervical, pass down the middle mediastinum to the diaphragm. The laryngeal nerves, being branches from the pneumogastrics and supplying sensory and motor branches to the larynx and the muscles of the cord, the voice was natural. It is also worthy of note that the sterno-mastoid muscles were strained and outstanding, showing that the spinal accessory nerves were uninjured. They arise from the cord in the region of the fifth and sixth cervical, and passing up the spinal canal appear in the neck through the foramen lacerum posticum, and supply motor fibres to pneumogastrics. The area of sensation was also limited to the distribution of the cervical plexus and the uninjured part of the brachial plexus. The cervical plexus is divided into three parts—ascending, descending, and deep. The area covered by the two former extends from the clavicle to the lower jaw; the sensation over this area was normal. The deep cervical includes the phrenics, which are the motor nerves of the diaphragm. The muscles of forced respiration have their nerve supply from the brachial plexus; they, therefore, were paralysed.

THE VALUE OF OXYGEN IN PIT RESCUES.

Pretoria Pit, situated about one mile from Clackmannan, is worked in two seams—an upper seam, 35 fathoms deep, and a lower seam, 40 fathoms; that is, there are 5 fathoms or 30 ft. of rock between the upper and lower seams; the gradient is 1 in 5. The pit is surrounded on all sides by old workings, containing water and foul air. Three-quarters of a mile to the west of the pit is a large unused quarry, covering several acres of ground, and about 40 ft. deep, full of water; an old pit shaft opens into this quarry. The drainage of the surrounding district is led into this quarry. The water suddenly broke into the lower seam, and shortly

afterwards it was found that the water level of the quarry had fallen rapidly. After the flooding was complete the whole amount of air in the lower seam would be about 20,000 cub. ft., coming from all the various passages and openings of every description. All the men except five escaped. Three of these were in the rise of one road, two were locked up in another. The three had about 70 yards of road to creep about in. The two were locked up in a space 2 ft. 6 in. high, 3 ft. broad, and 18 in. from tail of water to coal face. They were sitting with their backs against the coal face and their feet in the water.

The sketch is a rough horizontal plan of the lower seam.

The men were discovered in the usual way. They scored the roof with a stone, and the sound was heard by the search party in the upper seam.

After ten hours' working with pumps it was found impossible to gain on the water, and it was decided to sink a dumb shaft from the upper to the lower seam, near the point where the men were heard knocking. Before starting the dumb shaft, a 3-in. bore-hole was rapidly put down, when it was discovered that there were only three men here, a father and two sons; another search was made, when the other two men were located, a father and son. The three men were fed and kept supplied with candles through the bore-hole until rescued. The pit chart showed the other two men to be in such a perilous position that nothing could be done from the upper seam to save them.

The study of the rescue resolves itself into two stages, in so far as the air island is concerned:

First Stage.—During the entombment of the five men prior to the shaft being sunk.
Second Stage.—During search and rescue of the two men after the shaft was sunk.

First Stage.—There would be about 20,000 cub. ft. of air kept in motion, as to be here described, and all available.

Second Stage.—The air space at once became limited to about 7,000 cub. ft. for all purposes, as now the air tended towards the dumb shaft, and left only the air of the passage we were actually in—$600 \times 3 \times 4$ ft.

Oxygen was liberated in a space $90 \times 3 \times 4 = 1{,}080$ cub. ft., and gradually worked its way to the dumb shaft, oxygenating 7,000 cub. ft. of air, or an air area equal in size to that contained in an ordinary drawing-room, scattered throughout which were twenty men. It took three hours to complete the rescue, so that each man had roughly 2 cub. ft. of O_2 for three hours, which proved sufficient.

When the pit was suddenly flooded, on February 3rd, 1906, at about 9.30 a.m., the section where the men were entombed was completely isolated by water, and they were left in an island of air, which was compressed by the sudden roofing of the water.

This section was a main road with several side roads leading from it, the average height being about 2 ft. 9 in., the breadth about 5 ft., and the length about 70 yards. The contained air of this main road and the side roads was estimated at 20,000 cub. ft. The five men were breathing this air for four days, three of them also having a light burning, and thus causing an alteration of the component parts of the air, diminishing the oxygen and increasing the percentage of CO_2. The other two men were in darkness.

On February 6th at 8 p.m., when the sinking of the dumb shaft was completed, the compression was relieved, and exhalation at once began until air equilibrium was established. This exhalation of air diminished the amount of air in the lower seam. After the three men were removed twenty men now went down the shaft, and proceeded to effect communication with the remaining two men still entombed. In about three hours a stage was reached at which lights would not burn, and breathing was only possible with difficulty; work had to be suspended, and the rescuers were left in darkness. An interesting question here arises: (1) What is the lowest percentage of oxygen compatible with conscious life? (2) What percentage of CO_2 gas may be mixed with air and yet conscious life be supported, and for how long?

At this stage, which was midnight February 6th–7th, about 40 cub. ft. of oxygen was liberated at a point about 150 yards from the dumb shaft, and several feet from the two imprisoned men. This so altered the air condition that lights were got to burn, breathing became easy, and work, which had been suspended, again commenced. The oxygen supply was kept up as required until 4 a.m., when we all arrived at the upper seam.

Effect of Chesting Water upon Air Contained.

During February 4th, 5th, and 6th, while the dumb shaft was being sunk, and before the complete penetration of the rock strata, the air was confined and compressed between the tail of the water in the various roads on the one side and the coal face on the other. The tail of water was a movable, the coal face a fixed, quantity. The water chests, proceeding up and down the shafts, impinging against the water in the shaft before filling, and lifting each time about 1 ton of water to the surface, set up a movement along the water throughout the pit, thereby causing for each impingement a tidal move at the tail; this tidal movement communicated itself to the confined air at various points surrounding the places of entombment, and thereby kept the air in motion, causing a continuous mixing and aiding ordinary physical diffusion, thus preventing stagnation of CO_2 gas produced by the breathing and lights.

On the evening of February 6th, when the shaft was sunk, compression was relieved, exhalation took place, and although chesting was continued the movements now communicated from the water to the air became less effective, as all air movement at once tended towards the point of least resistance, the dumb shaft.

It follows: (1) That as the dumb shaft was a funnel from the lower seam to the upper, and the only opening, no air could be sent down that shaft. (2) That the twenty rescuers in the lower seam were consuming and burning the air oxygen, and liberating CO_2 gas at a point about 150 yards away from the dumb shaft.

The CO_2 gas rapidly increased, and any movement communicated from the water to the air simply mixed a highly poisoned air with a less poisoned air, as no fresh air could gain entrance; during this time also the water level was lowering, and there is no doubt that CO_2 gas, or black damp, was creeping on us from some old workings. At this stage, when lights went out owing to CO_2 gas, it mattered little whether water chests impinged on water or not, as all the confined air was highly charged with CO_2 gas, and all air movement was towards the dumb shaft.

The only thing now was to liberate oxygen as near as possible to the imprisoned men; a displacement of gases followed, and a diffusion of oxygen through the poisonous air; the oxygen effect beginning at the point of liberation, and gradually working its way backwards to the dumb shaft. This is what I expected, and what happened. During this final stage the rescuers were in an atmosphere of CO_2 gas in which no lights would burn for about fifteen minutes.

Proof of Oxygen Travel.

When proceeding down with the oxygen from the dumb shaft, the first few yards of our journey lights burned; as we went in they gradually lessened, and finally went out; about 80 yards in we passed some of the rescue party scattered and sitting in darkness; we proceeded about 60 yards in advance of them, and then gradually liberated the oxygen. The lights were soon set burning at the point of liberation, and some time afterwards the party of men we passed also got their lights to burn; and in both places lights burned until we all arrived safely at the upper seam.

Lessons Derived.

1. In all cases of similar entombments it would be advisable, while sinking a large shaft for rescue purposes, also to sink a large bore hole at the far end of such a position. Had a 3 in. bore hole been sunk near the place of entombment of the two men a current of air would have been established, and the difficulties we had to contend with avoided.

2. The necessity under such circumstances of taking into account the amount of available air, and the number of men sent into it. If the air is limited, as in this case it was, then the number of men sent down should also be limited, and men not actually working ought to come to the upper seam, all reliefs being kept there, and sent down as required.

Here let me add that acetylene gas will burn in a percentage of CO_2 gas with air in which an oil wick light will not. Whether this fact has been proved by former experiments or not, I cannot say, but it was so in this case.

On the afternoon of February 7th I again went down the pit, and found the air in the lower seam so foul and

charged with CO_2 gas that no light would burn, even in the dumb shaft, and descent was impossible. On February 10th the water was reduced to the level of the roads, thereby allowing an air current which cleared away the island of CO_2 gas, and I travelled over that section of the pit with safety and with lights.

These facts prove also my statement that no air could enter the section where the rescue party were working unless a bore hole or other opening had been made as stated.

The first fact shows the dangers we all passed through, and establishes for all time the value of oxygen in all such cases. Had oxygen not been used, the two men would have lost their lives.

In conclusion, I should like to say:

1. That oxygen gas is an absolute necessity and a valuable adjunct to all pit plant.
2. That the men ought to be trained in its uses.
3. That its properties and uses should form a part of the examination for a manager's certificate.

A SIMPLE METHOD OF ESTIMATING AMMONIA IN THE URINE, SUITABLE FOR CLINICAL PURPOSES.

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A KNOWLEDGE of the amount of ammonia present in the urine has an important practical value in many conditions met with in everyday practice. Normally about 3 per cent., in disease as much as 50 per cent., of the nitrogen excreted in the urine is in the form of ammonia. In diseases associated with grave metabolic upset, particularly where gross changes take place in the functions of the liver, and in severe toxaemias such as those not infrequently seen during pregnancy, the amount of urea is usually greatly diminished and its place is taken by ammonia and allied bodies. In the condition known as acidosis the formation of acid products, such as aceto-acetic and beta-oxybutyric acids in intermediary metabolism, necessitates the utilization of ammonia to effect their neutralization. The ammonium salts formed are excreted in the urine, and the quantity of these present, especially in its relation to the amount of urea, gives an excellent and early indication of the existence and extent of the metabolic perversion. The estimation of the organic acids excreted is a matter of very great difficulty; but since they are in combination with ammonia, the estimation of this body will afford information as to the quantity of these acids present. It is thus obvious that a simple method of estimating ammonia is greatly to be desired. It is only large quantitative changes in the output of ammonia that are clinically significant; in pathological conditions the nitrogen present as ammonia frequently constitutes 25 per cent., while it sometimes reaches 50 per cent., of the total. Thus the employment of an elaborate method of estimation in an attempt to obtain particularly accurate results is unnecessary.

The methods commonly employed[1] are either too inaccurate or too elaborate for clinical purposes. The best is probably the method of Folin,[2] which necessitates the employment of apparatus only found in a well-equipped laboratory, and the expenditure of several hours to perform; even this method, however carefully carried out, is not free from sources of error.

Malfatti[3] has recently described a method that is admirably suited for clinical use, since it is simple and rapid, requires no special apparatus, gives consistent results, and possesses a sufficient degree of accuracy.

The method depends on the reaction that takes place when a solution of an ammonium salt is treated with formaldehyde. Combination occurs between formaldehyde and ammonia with the formation of urotropine, as shown in the equation

$$4NH_4Cl+6CH_2O=N_4(CH_2)_6+4HCl+6H_2O.$$

The acid previously combined with the ammonia is liberated, and can be titrated. The procedure is conveniently carried out as follows:

Twenty-five c.cm. of urine are measured with a pipette into a conical flask of about 250 c.cm. capacity, and diluted with about 50 c.cm. of distilled water. Four drops of a 1 per cent. alcoholic solution of phenolphthalein are added, and decinormal sodium hydrate is run in from a burette till a definite pink colour that does not disappear on shaking is attained. The number of cubic centimetres of decinormal soda added gives the acidity of the urine. About 5 c.cm. of commercial formalin that have been neutralized beforehand by adding an equal volume of water, a drop of phenolphthalein solution, and sufficient decinormal soda to produce a pink tinge, are now added to the urine. The pink colour at once disappears, since the acids previously combined with ammonia in the urine have been liberated.

More decinormal soda is added till the pink colour reappears. This amount of NaOH is chemically equivalent to the ammonia previously present as ammonium salts, now in combination as urotropine. The amount of nitrogen present as ammonia in the twenty-four hours' urine can readily be calculated, since 1 c.cm. of decinormal soda is equal to 0.0017 gram of NH_3—that is, to 0.0014 gram of nitrogen.

I have found that the accuracy of this method can be considerably increased by adding 15 grams of powdered neutral potassium oxalate to the urine and shaking for two minutes before titrating; the end point is rendered much sharper, partly owing to the precipitation of calcium, partly to a diminution of the influence of ammonium salts, both calcium and ammonium salts having a disturbing influence on the end point of the first titration.[4]

I have compared this method with Folin's, carried out under the standard conditions laid down by him, in a large number of urines. The following is a sample of the results:

Grams of Ammonia Nitrogen in 100 c.cm. Urine.

Urine No.	Formaldehyde.		Folin.
	Without oxalate.	With oxalate.	
1	0.074	0.078	0.066
2	0.067	0.069	0.063
3	0.051	0.053	0.052
4	0.056	0.060	0.052
5	0.026	0.029	0.025

In all the urines examined the formaldehyde method gave higher results than the Folin method—usually about 15 per cent. higher. This represents about 1 per cent. of the total urinary nitrogen. What the causes of this discrepancy are cannot definitely be stated. None of the ordinary urinary constituents are affected, under the conditions of the method as described above, in such a way as to exert any influence on the titration.

Uric acid, for example, though affected by formaldehyde in the presence of excess of alkali,[5] can be added to urine in large quantity without altering the ammonia value given by the above method.

Sorensen has shown that formaldehyde combines with the amino group of amino acids, setting free carboxyl radicles, which act as acids and may be titrated, affording a measure of the amino acids. It was found that the addition of glycocoll and several other amino acids to the urine increases the ammonia value as given by the formaldehyde method, so that possibly the difference between this and the "Folin" value represents amino acids. Whether these are present in normal urine is at present a matter of dispute, but in pathological conditions—usually those in which the ammonia output is high—large quantities of amino acids are excreted. These bodies have replaced part of the urea, and their significance clinically is similar to that of excess of ammonia. The fact that the formaldehyde method gives the sum of ammonia and amino acid value is thus rather an advantage than otherwise. If it is desired to estimate the amount of amino acids excreted in cases in which the output is high, an approximate result can be arrived at by subtracting the Folin from the formaldehyde values.

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[1] For a good review of the methods used for estimating ammonia in urine see Shaffer, *American Journal of Physiology*, vol. iii, p. 330, 1903. [2] *Zeitschrift für physiologische Chemie*, Bd. xxxvii, H. 2, 1902. [3] *Zeitschrift für analytische Chemie*, 1908, H. 5, S. 723. [4] Folin, *American Journal of Physiology*, vol. ix, p. 265, 1903. [5] Sorensen, *Biochemische Zeitschrift*, Bd. vii, S. 47, 1908.

THE SCIENCE COMMITTEE
OF THE
British Medical Association.

REPORT CXII.

OBSERVATIONS ON THE PHYSIOLOGY OF THE FEMALE GENITAL ORGANS.

BY

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and

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III.—THE CORRELATION OF THE UTERUS AND OVARIES.—*Continued.*

RESULTS OF EXPERIMENTS.

SERIES B.

Removal of Uterus and Subsequent Examination of the Ovaries.

On the whole, we have not been satisfied with the experiments we have conducted in this inquiry. We operated upon two bitches and twelve rabbits. All the animals were about 6 weeks of age at the time of operation. Unfortunately our bitches died of distemper within a few months of the hysterectomies, so that they never reached sexual maturity. We lost five of our rabbits, too, from an epidemic of pneumonia. The rest (about half) that reached sexual maturity were killed at different periods, the longest time that was allowed to elapse between the operation and the examination being eight months. In every case the uterus was removed and the Fallopian tubes as far as practicable. In several cases, when the animals were killed, it was found, however, that the whole of the Fallopian tube had not been removed. It will be understood how difficult it was to effect this in view of the small size of the animals.

In no case did we find any histological change which could have been held to have occurred as the result of removal of the uterus. At the same time there appeared to be the negative effect that in no case could we discover the formation of corpora lutea,* or any evidence that Graafian follicles had ruptured, in spite of the fact that the animals came on heat and had connexion with the buck.

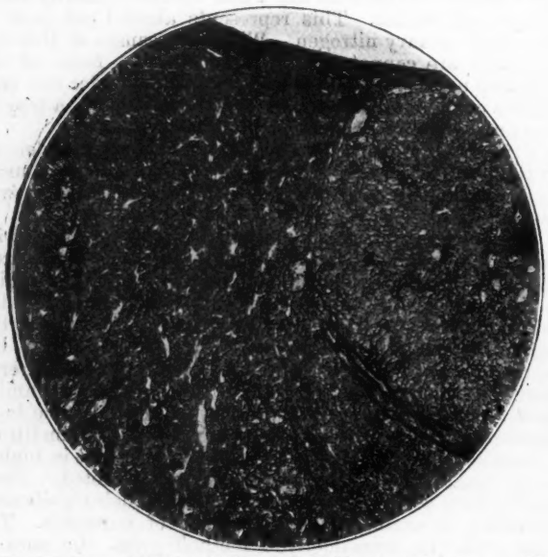

Fig. 15.—Normal adult rabbit's ovary with corpus luteum. × 200.

In Fig. 15 is seen a normal adult rabbit's ovary with a corpus luteum. In Fig. 16 is seen a section of an ovary removed from a doe whose uterus had been removed eight months previously, and who had frequently been to the buck. Many sections were cut of this ovary, but nowhere could we find evidence of corpus luteum formation. Ripe follicles and degenerated follicles there were in abundance, but nowhere was there any evidence that a follicle had ruptured. The degeneration, too, of the follicles appears to be of a more cystic nature than in the normal animal. It will be noticed in Fig. 16 that the interstitial cells are as well marked as in the normal ovary. In Fig. 17 is shown a section of the ovary from another doe whose uterus had been removed five months previously. In this case also no corpora lutea can be seen, although in other respects the ovary appears normal.

Heape[5] has produced evidence to show that the follicles in the normal rabbit's ovary do not rupture unless the doe has connexion with the buck. But in our cases the does that attained maturity had this connexion and apparently came on heat, but in spite of this there was no rupture of Graafian follicles. We must confess that we had fully anticipated that we should find marked changes in the ovary after hysterectomy in spite of the observations of others, and we based this belief on our own clinical experience and on the clinical experience of Abel, Zweifel, and others. But beyond the fact stated above—which may or may not be of importance†—we had no confirmation of our ideas. It is quite possible, however, that a much longer time must be allowed to lapse before changes become apparent, and once more we cannot refrain from saying that, in view of the structure of the rabbit's ovary, comparison with the human ovary is hardly fair. We consider, therefore, that our experiments are inconclusive in this matter, and we shall hope to return to the subject at some future time.

SERIES C.

LIGATION OF THE UTERINE CORNUA.

In this series of experiments we have made observations on (*a*) the nature of the uterine secretion, (*b*) the condition of the uterus which had undergone expansion, (*c*) the condition of the ovaries (in the first experiment).

I.—*Ligation of the Cornua without Removal of Ovaries.*

We performed a large number of these experiments, in order to collect the fluid secreted by the uterus, for examination and experimental purposes. Consequently we were able to make a number of observations. In all cases we used silk as the ligature material, and usually we doubly ligated each uterine cornu, although it is not necessary to tie the ovarian extremity of the horn, as no leakage occurred in those cases in which we omitted to do so.

Fig. 16.—Rabbit's ovary after hysterectomy. × 200.

(*a*) *The Nature of the Secretion.*—This we have already dealt with in Paper II.

* It is somewhat difficult to define what is meant by "corpora lutea" in rabbits' ovaries since there is no rupture of the follicle without connexion with the buck, but we may recognize *three* varieties (and we include all three in this term): True and false corpora lutea and the corpus luteum of normal degeneration.

† Especially in regard to lowered calcium content producing rupture of the follicle.—See Paper II. Compare also C. J. Bond, Experiment XXV (see references).

(*b*) *The Condition of the Uterus which had Undergone Expansion.*—A section of such a uterus is shown in Fig. 18. One observes a more or less even distension. The endometrium is flattened and thinned from pressure, but the muscular layers do not seem to suffer. It is probable that in those cases in which the muscular layers are well developed gradual distension of the uterine cavity leads to hypertrophy. This is a point of considerable interest,

Fig. 17.—Rabbit's ovary after hysterectomy. × 200.

and very suggestive of the muscular hypertrophy which occurs in pregnancy. We intend to follow the matter up further.

(*c*) *The Condition of the Ovaries.*—We have been unable to trace any changes in the ovaries as the result of this experiment—microscopical or macroscopical. Bond thought that there were changes, but the condition that he found is probably merely the ordinary result of Graafian degeneration, frequently to be observed in rabbits that come on

Fig. 18.—Hydrometra without removal of ovaries. × 200.

heat but do not have connexion. (Compare Heape, loc. cit.)

Figs. 19 and 20 are sections of young and mature ovaries respectively, removed from does in which hydrometra had been artificially produced. It will be seen that they are quite normal.

II.—*Ligation of the Cornua with Synchronous Removal of the Ovaries.*

(*a*) Fluid is freely secreted, the removal of the ovaries making no difference to the quantity. The fluid collected resembled that from the virgin uterus, containing less calcium salts than that obtained from a menstruating uterus. We also noticed that in its physiological effect it was not as active as that obtained from the menstruating uterus. (This will be referred to again in Paper IV.) In regard to this inactivity there was a possible source of error, in that it had been kept, sealed in glass capsules, for some little time before being used. We mention this fact

Fig. 19.—Ovary of young doe with hydrometra. × 200.

though we are not ourselves convinced that it is one of any importance.

(*b*) In Fig. 21 is shown a section of a uterus the horns of which had been tied two and a half months previously, the ovaries having been removed at the same operation. In this particular case the rabbit had had young shortly before. Those experiments on rabbits that had not been recently pregnant gave the same results.

It will be seen from the section that a large hydrometra

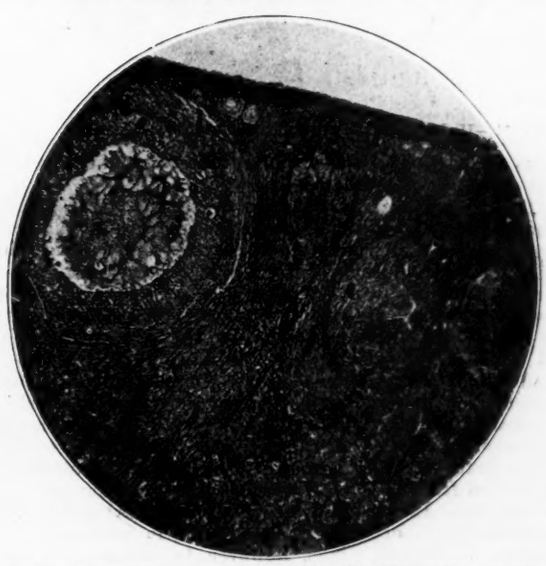

Fig. 20.—Ovary from young adult rabbit with hydrometra. × 200.

was formed, and that in the process of expansion the endometrium has become much thinned from pressure. It is interesting to note that *the muscular layer has not become atrophied to the extent it would have done had the uterine horns not been tied* when the ovaries were removed. We think that this is to be explained by the fact that the muscle fibres are called into use to resist the increasing pressure. This view is in harmony with the idea we hold that atrophy of the uterus after removal of the ovaries is primarily due to the consequent inactivity of the uterine muscle, which is, as we have already shown, the first

portion of the organ to be a subject to degenerative changes. It is important to remember that this condition of muscular atrophy recurs seasonally in a physiological manner and degree in wild rabbits.

III.—*Removal of the Ovaries followed by Ligation of the Uterine Cornua at a Subsequent Date.*

(*a*) We found that the fluid secreted in these circumstances was as copious as in the last experiment, and closely resembled that secretion in its low calcium content and physiological inactivity. (This was also, however, as in the case of that obtained in the last experiment, kept some time in sealed capsules before being used.)

(*b*) A typical section of one of the uteri examined is seen in Fig. 22. In this case the animal had been pregnant, and had aborted after removal of the ovaries. Twenty days later the cornua were tied. A month later the animal was killed. In every particular the section of this uterus is comparable with that seen in Fig. 21, and in marked contrast with Fig. 10.

Removal of the ovaries, therefore, whether performed previous to ligation of the cornua or synchronous with that operation, does not affect the quantity of the secretion, while it does appear to alter the chemical nature of

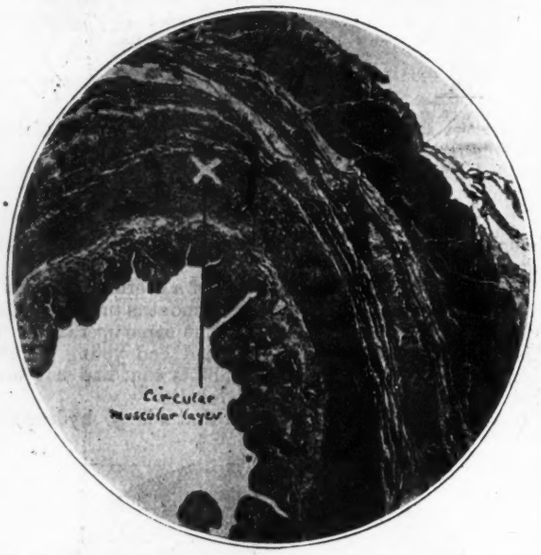

Fig. 21.—Hydrometra with synchronous removal of ovaries. ×c200.

it, as already indicated by the lowered calcium content and reduced physiological activity.

The histological appearances of the uteri are striking and suggestive, and readily bear the interpretation already put upon them in regard to the hypertrophy rather than atrophy of the muscular layer under these conditions.

We found also in the course of our experiments on hydrometra that unilateral ligation of a cornu does not at all interfere with pregnancy in the other cornu. One of our rabbits in which we made a unilateral hydrometra and stitched it to the abdominal parietes for satisfactory observation subsequently had two litters, both of which appeared at full time, and were reared. We thought, however, that the cyst got smaller during the pregnancies. This bears out Bond's observations as to the absence of secretion from a cornual fistula during pregnancy in the other horn. Indeed, many of our experiments here recorded confirm much of what he has stated in a recent publication. It is only right, however, to mention that our experiments were begun before his paper appeared.[6]

There is one more experiment (for the successful performance of which we are indebted to Mr. James Smith) to which we would like to allude:

One of us arranged with a keeper in Scotland to catch forty wild doe rabbits in February. Twenty of these were immediately killed and the genital organs examined. In every case the uterus was in the inactive or non-contracting state, and was flat and ribbon-like. The ovaries were small, and contained no ripe Graafian follicles. The remaining twenty rabbits were kept in captivity away from bucks for about two months, during which time two died. As far as possible the animals kept in captivity were allowed to lead a natural life, except for the presence of bucks. At the time these were killed and examined the ordinary wild rabbits were breeding. On examination every uterus was found to be in an inactive condition, and the ovaries were all small, and contained no ripe follicles.

It is, of course, possible, that captivity was the cause of this—of the fact that none were on heat; but we incline to the view that it was—in part at least—because the presence of the buck is an exciting factor in the case of wild does in regard to the onset of genital activity early in the year. We were quite unprepared for this result of our examinations, for we hoped to get inactive uteri in the first lot and menstruating uteri in the second, in order to estimate the total calcium in the ash of each lot of uteri. We give this observation for what it may be worth. The great difference between wild animals and domestic animals in their breeding habits is at once a source of wonder and information, and enables us more than anything else to realize how intimate is the association between the genital functions and the general metabolism of the body. The experiments we have described not only indicate that there is this close connexion between the general metabolism and the genital organs, but also that there is a definite interdependence (so long known and recognized, but never defined) of each part of the

Fig. 22.—Hydrometra after previous removal of ovaries.

genital apparatus—that is to say, of the uterus and ovaries.

And, finally, these experiments help us to understand the specific changes that occur in each part as the result of interference with the other, or in altered circumstances. They have, in short, enabled us to attempt to define what that specific relationship is, and in coming to our conclusions we wish to acknowledge the assistance we have received from the work of those other observers in the same field of investigation to whom we have already referred.

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Memoranda:

MEDICAL, SURGICAL, OBSTETRICAL.

A CASE OF MYCOSIS FUNGOIDES IN THE PRE-MYCOTIC STAGE.

R. F., aged 65, was admitted to Dr. Calwell's wards in the Royal Victoria Hospital, Belfast, on January 2nd, 1909. Fifteen months before admission he noticed the extensor surfaces of both forearms covered with reddish scales. During the succeeding four months this scaliness spread over the whole of his body, and was accompanied by extreme pruritus. Four months previous to admission large patches of brownish pigment appeared on his trunk and extremities.

On examination his body was found to be covered with branny, desquamating scales, and he complained bitterly of the associated pruritus. The skin had a general reddish tinge, with large areas of brown pigment irregularly deposited on trunk and limbs. The skin was also greatly thickened, especially over the extensor surfaces of the knees and elbows, where the integument hung in thick, leathery folds. The lymphatic glands in both axillae and groins were enlarged, and there was an almost complete absence of hair from the body. He complained greatly of cold, nervousness, and general weakness. The differential leucocytic count showed 8 per cent. eosinophiles, but otherwise the blood was normal.

He was detained in hospital for five weeks, and calcium lactate internally with calamine liniment locally were tried, but no improvement was observed.

The following were given as the outstanding features of the premycotic stage of mycosis fungoides in the *Journal of Dermatology*, vol. iii, No. 3:

1. Spontaneous occurrence of attacks of inflammation of the skin; practically involving the whole body, each successive attack leading to thickening of the corium and subcutaneous tissues, so that permanent, thick, tortuous folds result.
2. Loss of the skin appendages.
3. Enlargement of all the lymphatic glands.
4. Frequent febrile temperature and progressive loss of strength, terminating in death from exhaustion.

W. P. MACARTHUR, M.B.,
Lieut., R.A.M.Corps; Royal Victoria Hospital, Belfast.

BEE STINGS AND RHEUMATISM.

THE progress of the cases recorded in my note published in the JOURNAL of December 5th, 1908, p. 1678, has been since that date as follows:

CASE I.—A man, aged 76, tells me he has suffered not for ten, but fifteen years. He is continuing the treatment at the rate of twelve stings a week, and the pain which "left his hips and went into the thighs" changed its position to the knees on December 16th; on December 30th it returned slightly to the left hip, and on January 12th moved to the calves of both legs. He had only had fifty bees on the last date, having been shy at the pain in the commencement.

No. II still has some intercostal pain, but very much shorter in duration. She gave up the bees, but recommenced them after ten days.

No. III is coming to Birmingham again to have more bee stings, as he has been much freer from pain, which is much less, especially at night.

No. IV continues quite free from pain and is in excellent health.

The following cases are new:

No. V.—F. C., a mechanic, aged 34, suffered from sciatica for eighteen months. For four months he was under the care of a private medical man who ordered him to Droitwich, where he had the usual baths for fourteen days. He went there also for the next eight or nine week-ends, having on each occasion four baths. He returned little improved, and attended a hospital for fourteen days as an out-patient. After that for four months he was treated at the same institution by massage, and the galvanic battery, but without relief. On November 27th he commenced with twelve bee stings, which were repeated every week for six weeks. In five weeks there was marked improvement, and when I saw him last, on January 16th, he said he had been getting steadily better, so that he frequently did not know he had got sciatica. He had had, up to the last date, 100 bee stings.

No. VI.—K. H., a married woman, aged 36, had during the past three years suffered from rheumatism and arthritis in the jaws, hips, knees, feet, elbows, wrists, shoulders, and hands. The bees were applied first on December 1st, and she had twelve every week till January 4th, or sixty in all. "Results: Rheumatism nearly gone from the shoulders. Right wrists a little free. Right arm not quite set, but apparently released a little. Not so much pain generally. For the past two years there was incessant acute pain whether active or idle."

No. VII.—E. N., a single woman, aged 35, had suffered for three years and a half with rheumatoid arthritis in wrists and fingers, which are much deformed, and also in the ankles. She had been treated as an out-patient at a hospital and was an in-patient for ten weeks, when, she says, she "received some relief from the rest from work." She commenced the bee stinging on November 21st, 1908, and on January 16th had had sixty-six stings. The grasp was much stronger, the wrists, fingers, and ankles more movable, stronger, and quite free from pain. Her nights, which had been frequently very bad, are much better.

No. VIII.—H. D., a mechanical engineer, aged 54, was lamed by a kick above the left knee when 10 years old, and had some bone removed. For the past thirteen years he has been gradually getting worse in the other leg from increasing sciatica. On January 8th and each of the following dates I applied eight bees to the region of the sciatic nerve—for I am satisfied that the stinging is not only antitoxic, but also counter-irritant—and on the following day he told me that before stinging he had to hang on to various articles of furniture to assist his crossing the dining-room, but when he returned home, after being stung, he could do so without assistance. On January 11th his leg felt stronger and he could walk better. On January 13th he said he had less pain on leaving bed, and much better nights since January 8th, but followed by considerable pain in the day. He was better on January 15th and his nights were still good. Walking did not seem so firm. There was a large, circular, inflamed patch over the trochanter. The last application of bees was followed by severe inflammation along the thigh. On January 19th the leg was not so strong, and there was increased pain. On January 22nd he reported that he had had more pain in the day, but the nights were very much better. On January 25th the pain was still severe, particularly in the femur. On January 29th pain followed in the right hip joint. On February 2nd there was great stiffness in thigh and knee-joint, and he was compelled to walk more slowly. On February 5th there was no improvement; but he was no worse. This gentleman seems to be losing heart, but, after thirteen years, cure cannot be expected under a month, and after only 100 bees have been used. He is continuing the treatment.

As to my own case, up to January 22nd my progress was most satisfactory. I continued to apply two lots of bees a week, and in all 271 to that date. I had slight twinges of muscular rheumatism of not more than a few minutes' duration, for which reason I persevered with the treatment. But on that day I contracted a chill, and suffered at night some pain in the glutei and right sciatic nerve. I at once put on eleven bees, and slept well, the pain next morning being much easier, and permitting me to work. On January 23rd, after a long harassing day, I got to bed tired at 10 p.m., and applied fifteen bees, and on January 24th only had slight pain in the glutei, none in the sciatic. I made a necropsy for the coroner at 6.30 p.m., in a fireless mortuary, with a glass roof, the temperature being below freezing. On January 25th I attended the inquest in a court with mercury at 70°, the external temperature being 25°. I applied twelve bees on January 24th, and eight on the following day. On January 26th I had great pain in the glutei on walking, and put on twelve bees at night. Next morning I was much easier, with only slight pain towards night, and had eight bees. On January 28th I still had pain in the glutei, and on January 29th this was increased on walking. I applied fourteen bees, and was better on January 30th, but still had some difficulty in walking. On Sunday, January 31st, I rested in bed all day, and applied eight bees at night. From February 1st to 7th the pain varied. On February 3rd and 4th there was much pain after walking, and I applied in six days forty-five bees. On February 20th I was entirely free from acute pain, but still continue the stinging. I am taking no other medicine, and, but for occasional transient pain, feel very fit, and have, as one of my old ladies says, a very "avaricious appetite."

I regret to hear from several medical men that the bee-keepers, both here and in Scotland, will not take bees from their hives during hibernation, although the Editors of the *British Bee Journal*, 8, Henrietta Street, Covent Garden, stated, in reply to a letter from me in their issue of January 21st, "It is well known that there would be little or no trouble in obtaining a few live bees at any season of the year from any expert who could have access to a hive." I have ascertained that if the bees are put in a properly ventilated box, covered with cotton-wool, and enclosed in a second box, also ventilated, they will stand a long journey by post. They should at once be placed in a very warm position. I made a hole in the rim of a halfpenny tin plate, allowing the upright of an iron retort-stand to pass through it; the plate rests on the iron ring, or is fastened with wire to make it more secure. A spirit lamp with ½-in. flame is placed beneath, and the ring lowered to 4 in. or 5 in. from the flame. A cheap thermometer is wired to the top of the upright, the bulb resting on the plate. By this means a temperature of 76° can easily be maintained, and the bees, if supplied with candy, as they ought to be by the vendor, require only a few drops of water on their food each day, and will keep well for several days. The spirit lamp should be filled in the evening, or the bees may be found dead from cold in the morning. My bees are quite lively at the end of four days.

I have been asked frequently as to the pain of stinging. After the first three stingings on myself, I find that the intensity of the pain is much less lasting than at first—in fact, is over in half an hour at the most. Some of the bees seem to cause greater pain than others, but I think this may be explained by a larger cutaneous nerve being wounded by the sting. I hope that shortly your readers will have, from his own pen, the experience of another Birmingham practitioner, who tells me he has found great relief to old-standing sciatica from this treatment.

Birmingham. E. T. BURTON.

British Medical Association.

CLINICAL AND SCIENTIFIC PROCEEDINGS.

YORKSHIRE BRANCH: LEEDS DIVISION.

Leeds, Tuesday, March 2nd, 1909.

T. WARDROP GRIFFITH, M.D., F.R.C.P., in the Chair.

Venous Pulse in Neck.—Dr. GRIFFITH gave a description of the venous pulse in the neck by diagrams on the slate, and a demonstration of pulse tracings in cardiac arrhythmia by means of the epidiascope. Normally three waves could be made out in a tracing from the jugular vein. On comparing such a tracing with a radial artery tracing taken simultaneously, the second wave was found to occur $\frac{1}{10}$ second before the radial wave, and, as was known, the carotid pulse preceded the radial by $\frac{1}{10}$ second, it might be assumed the second venous wave was due to the impulse communicated from the arteries in the neck; the first wave must be due to the auricular contraction which came just before, while the third wave was due to the blood held up in the auricle and veins during the closure of the tricuspid valves. The three waves were found when the heart rhythm was regular, and acting in obedience to a stimulus starting at the sinus, and passing along the *a-v* bundle to the auricle and ventricle. Tracings from a case of mitral disease showed remarkable alterations of rhythm; the jugular pulse, after a sudden rapid irregular action of the heart, lost the auricular wave, and a steep wave synchronous with the ventricular systole appeared. This new wave was caused by an impulse sent through the tricuspid valve and the auricle to the jugular vein by the ventricular contraction. In order to effect this the auricles and the ventricles must contract together. In such a condition the stimulus for contraction was assumed to start at the node in the *a-v* bundle, and cause simultaneous action of the auricles and ventricles; this was named "nodal rhythm." The action of the *a-v* bundle might be impaired by disease, or the bundle might be weak and inactive. Disease might affect the sino-auricular junction and produce arrhythmia, or it might be so situated that the stimulus did not get beyond the auricle. In such a case the ventricle might beat with a rhythm of its own, and much slower than the auricle. Such impaired conductivity of the bundle tended to heart-block, and might sometimes be improved by the administration of atropine, while digitalis was contraindicated, for partial heart-block might be caused by digitalis.

Dr. GRIFFITH also showed specimens of disease of the heart.

Fracture of Ribs.—Dr. ALLAN read notes of cases of extensive fracture of ribs. Two men, one aged 56 the other 61, fell into the same clay pit, a distance of 50 ft.; both lived about two days, and in both the injuries were confined to the bones of the thorax. In the younger man all the right ribs were fractured, and all the left except the eleventh and twelfth; the other man had the fifth, sixth, eighth, ninth, eleventh, and twelfth right ribs broken, and all the left except the eleventh and twelfth; this man also had a fracture of the sternum. A man aged 81 and a woman aged 66 fell from windows a distance of 25 ft. The former was killed at once, the latter lived a few hours. In the man all the right ribs were fractured except the first, eleventh, and twelfth, and all the left except the first. In the woman, the second, third, fourth, fifth, and sixth right ribs were fractured and all the left ribs; here there were fractures of the pelvis and left forearm, while in the old man only ribs were fractured. A man aged 67 and another aged 52 had fracture of ribs, the former of six ribs the latter of seven ribs, due to fall down flights of steps, and in neither had the condition been diagnosed before autopsy. There were no other injuries.

Specimens.—Dr. ALLAN also showed various pathological specimens, and a lad with general ichthyosis.

Twenty members were present. Tea was provided by the Dean of the Medical School, Professor Grünbaum, to whose courtesy the Division is indebted for permission to meet in the University buildings.

Reports of Societies.

OPHTHALMOLOGICAL SOCIETY OF THE UNITED KINGDOM.

Thursday, March 11th, 1909.

W. H. H. JESSOP, F.R.C.S., Vice-President, in the Chair.

Congenital Anterior Staphyloma.

MR. E. TREACHER COLLINS, in a paper on congenital anterior staphyloma, described the case of a child born with an opaque, vascular, staphylomatous cornea; it had never any discharge from the eye. When 15 months old he performed a Mules's evisceration upon it, and subsequently made a pathological examination of the elliptical piece removed from the front of the eye. It was found that Descemet's membrane and the ligamentum pectinatum were absent, there was no stroma to the iris, and the lens was also malformed. Most cases of congenital anterior staphyloma had been attributed to intrauterine ulceration. The speaker thought that a case in which there was complete absence of Descemet's membrane and the ligamentum pectinatum could not be accounted for by ulceration, and must be attributed to some developmental defect. Possibly there had been a failure in the differentiation of the mesoblast which intrudes between the lens vesicle and the surface epiblast into its several layers. Normally there developed from it the substantia propria of the cornea, Descemet's membrane, its lining endothelium, and the antero-fibrovascular sheath of the lens. From this latter the fetal lens largely received its nutrient supply, and the stroma of the iris was to a great extent formed. A failure in the differentiation of the several structures or atypical development of the intruding mesoblast might, as in the case under consideration, lead to a vascularized, thickened, fibrous mass in place of the substantia propria, an absence of Descemet's membrane, of the stroma of the iris, and a malformed lens. He concluded by referring to several other malformed eyes, in which he had found defects in development of Descemet's membrane or the ligamentum pectinatum of a less extensive character.

The paper was discussed by Mr. PARSONS and Mr. G. COATS, who failed to agree with all that Mr. Collins had advanced.

Hereditary Cancer.

Mr. E. NETTLESHIP contributed seven new pedigrees of hereditary cataract: (1) 24 cases of lamellar cataract in four generations; (2) and (3) coraliform cataract, one of them containing 20 cases, in four generations; (4), (5), (6), and (7) pedigrees of senile and presenile (or juvenile) cataract in from two to four generations, some of them illustrating "anticipation," that is, the occurrence of disease at an earlier age in the younger generation. Two of the pedigrees showed the introduction of a second heritable disease from an outside non-cataractous stock, goitre in one instance, insanity in the other.

Temporary Colour Blindness.

Dr. F. W. EDRIDGE-GREEN and Mr. C. DEVEREUX MARSHALL submitted a paper on so-called artificially produced temporary colour blindness. They stated that Professor Burch, of Oxford, had read a paper before the Royal Society, which was published in the *Philosophical Transactions* in 1898, giving the results of his experiments, in which he split up direct solar light with a spectroscope, and then collected the rays of the individual colours with a convex lens, and saturated his own eye with any desired colour. He then examined a spectroscope illuminated with diffuse daylight, and stated his results. He found that he could produce temporary colour blindness to any colour in this way. His most important point was that by saturation with light at the "D" line, red and green blindness supervened, and these colours could not be perceived, and this he held to support the complex nature of yellow light, the Young-Helmholtz theory of colour perception. The authors criticized these experiments. They thought that if direct sunlight were focussed in the retina, not only temporary, but probably permanent, blindness might be produced, and anyhow the eye would be incapable, after much treatment, of making accurate observations on a feebly-illuminated spectrum. They produced fatigue in their

own eyes with a sodium light, and then found that yellow and orange became obliterated, and that red and green met in the spectrum, and that there was no diminution of those two colours. Other experiments were repeated with different colours, and in most of them they disagreed with Professor Burch's results, which they held were due to faulty methods of conducting the experiments. These facts were, they contended, only explicable on the psycho-physical theory of colour vision (Edridge-Green's theory).

ROYAL SOCIETY OF MEDICINE.

SECTION OF SURGERY.

Tuesday, March 9th, 1909.

Mr. WARRINGTON HAWARD, President, in the Chair.

Urachal Cyst.

MR. ALBAN DORAN read a paper on a urachal cyst simulating appendicular abscess. His patient, a girl aged 17, had an imperfectly formed genital tract; the uterus was bicornuate, with only the right cornu functioning. After describing his procedure in this and in a former case, the author referred to the studies of Wutz and Binnie on the urachus; to the vesico-urachal valve; and to the question of a meso-urachus described by Keith, Thane, and Binnie. He recommended the classification of morbid dilatations into (1) urachal fistulae, (2) primary cystic fistulae, (3) pure urachal cysts, and (4) secondary cystic fistulae developed from pure cysts which have acquired communication with the bladder, or the surface at the umbilicus. He mentioned the spurious cases of Hoffman and Lawson Tait, which were really instances of encysted dropsy or tuberculous peritonitis. He thought there was certainly some connexion between the anomaly in the urachus and the arrested development of Müller's ducts. The asymmetry observed in his case, in which it had led to a diagnosis of appendix abscess, had been noted by other surgeons, and detected in incipient cysts by pathologists. Suppuration in a urachal cyst was by no means uncommon, and peritonitis around them quite common.

Mr. F. S. EVE described a case, and exhibited the specimen, of a large cystic sarcoma of the urachus. The patient was a man aged 38. When seen he was complaining of painful micturition, and was having rigors. Something like five pints of blood, dark and obviously infected, was let out; the bladder was opened in removing the mass, which was sessile, upon it. The patient died on the fourth day. In Wieser's collection of 89 cases it was notable that suppuration occurred in at least a third. Operative difficulties frequently rendered complete removal impossible. He interpreted the anterior peritoneal covering of his specimen as due to the expansion during its growth of a meso-urachus, or to involution of the peritoneum as it grew upwards and backwards. He thought it remarkable how seldom a surgeon came across remnants of the urachus in opening the abdomen. He had only seen one other case of urachal cyst, and that was brought from Clare market; it was attached to a pig's bladder.

Mr. W. G. SPENCER asked where the sepsis came from; did it reach by way of the bladder or from the intestine?

Mr. DORAN, in his reply, said that intestine was nearly always adherent at the back of these cysts, and hence infection was generally from this source.

Continuous Suction.

Mr. HERBERT T. HERRING demonstrated a portable apparatus for the employment of continuous suction in surgery. It consisted of a rotary pump, electrically driven, acting by means of thick-walled tubing through a "receiver," upon the wound or cavity under treatment. The mechanism was capable of utilization for irrigation or for the suction of viscid substances such as blood.

CLINICAL SECTION.

Friday, March 12th, 1909.

Sir THOMAS BARLOW, M.D., President, in the Chair.

Nerve Anastomosis.

MR. A. H. TUBBY showed (1) a man, aged 19, admitted to Westminster Hospital for complete extra-cranial paralysis of the branches of the facial nerve, resulting from an operation wound. Facio-hypoglossal anastomosis was effected, and improvement in the orbicularis was noted a week later. In fourteen days the left angle of the mouth began to move. Progress continued until the whole left side of the face recovered. When shown there was only a little drooping of the left side of the mouth and very slight associated movements of the tongue and face. (2) A boy, aged 9, admitted to Westminster Hospital in October, 1905, for infantile paralytic talipes calcaneus of seven years' duration. The nerves to the gastrocnemius and soleus were separated from the internal popliteal and implanted on to the external popliteal trunk. The case slowly improved, and, though full recovery of power was not obtained, there was great amelioration of the original condition. (3) A man admitted with total paralysis of the right arm. He had been stunned on board ship, and at a hospital in New York was trephined as suffering from meningeal haemorrhage, without benefit to the paralysis. On admission under Mr. Tubby, the brachial plexus was dissected out from the spine to the lower part of the axilla. The upper part was lost in a dense mass of fibrous tissue, and in the fifth nerve was found a fibroneuroma. This was excised and the distal trunk of the fifth cord inserted into the sixth on February 12th, 1906. Recovery of power began two years after the operation, and when shown the patient had a well-developed biceps, could flex the forearm well, and the deltoid action was returning. Sensation was still absent over the greater part of the limb, but was spreading down from the upper and outer part of the arm, and had nearly reached the middle of the outer surface. Further improvement was expected.

Mr. C. H. FAGGE showed (1) a girl aged 10 in whom complete facial paralysis followed a mastoid operation, otorrhoea continuing. A radical mastoid operation was performed at the Evelina Hospital, and at the same time the vertical portion of the facial nerve was divided as high as possible, and its distal end grafted into the side of the undivided hypoglossal exposed by continuing the mastoid incision downwards into the neck. Electrical treatment was resumed, and within a few weeks the left facial muscles regained their tone and the power of reflex blinking returned. (2) A case of inflammatory facial paralysis treated by anastomosis between the facial and the trapezial portion of the spinal accessory; movements of the left side of the face were best carried out when the left arm was raised.

Mr. C. M. PAGE (for Mr. BALLANCE): A woman, aged 54, in whom, two months after a comminuted fracture dislocation of the upper end of the humerus, the internal and posterior branches of the brachial plexus were sutured, with the result that there was recovery of the function of the musculo-spiral nerve and of sensation in the distribution of the ulnar.

Dr. R. F. KENNEDY (for Mr. SARGENT) showed a case of successful nerve grafting of the fifth nerve of the brachial plexus into the sixth.

Mr. JAMES SHERREN showed ten patients illustrating the results of treatment of various nerve injuries. They included (1) a man aged 36 who had injured the median nerve below the point at which its palmar cutaneous branch is given off, probably by a fall on the outstretched palm; trophic blisters resulted. (2) A man aged 24 who had sustained an incised wound of the wrist on October 28th, 1908, dividing the ulnar nerve below the point at which its dorsal branch is given off. Primary suture was performed the same day, and he was discharged to the out-patient department on November 18th, with the typical sensory loss. By February 11th, 1909, the loss of sensibility to prick had disappeared, but no change had taken place in the area of loss to light touch.

Miscellaneous Cases.

Among the other cases shown were the following:

Major G. C. SPENCER, R.A.M.C.: A case of *Sarcoma treated by Coley's fluid.* The patient was a man aged 33, who in August, 1906, had a large growth in the lower part of the abdominal wall, infiltrating the recti, attached to the pubic symphysis, and extending down in front of the bladder so that it could be felt per rectum. Since the end of March, 1907, he had not had any further treatment; the tumour had completely disappeared, and he had continued in perfect health.

Mr. LAWRIE MCGAVIN: A case of *Perineal hernia* in a woman aged 36. When the hernia was reduced, a gap

admitting two fingers could be felt in the central portion of the levator ani muscle.

Mr. STANLEY BOYD described a similar case in which the protrusion was found to contain fat.

Mr. A. E. BARKER also recalled a case of corresponding appearance which on operation turned out to be a lipoma.

Dr. A. E. WYNTER: Case of ascites cured by permanent *drainage through the femoral ring.*

SECTION OF ANAESTHETICS.

AT a meeting on March 5th, Mr. RICHARD GILL, President, in the chair, Dr. DUDLEY BUXTON, dealing with the *Treatment of shock during anaesthesia*, said that the theory that the production of very profound narcosis abrogated shock had been proved by experiment to be wholly fallacious. If, on the other hand, the narcosis stopped short of the third degree—that is, the stage of anaesthesia—the higher centres, though dulled, were not wholly unreceptive of impulses, and dangerous reflexes might occur, the patient being liable to fatal syncope. Once the third degree was obtained and the anaesthetic evenly distributed throughout the tissues, the patient was comparatively safe, and the quantity of anaesthetic required subsequently was much less. The deep reflexes, such as those resulting from insult to sympathetic nerves and plexuses, could not be prevented by any degree of narcosis; they could not be abolished until life was extinct. It had been shown that these reflexes, acting upon the vasomotor centres, the heart, and the respiration, were dangerous in proportion to the depth of narcosis after the stage of anaesthesia was established. Treatment lay rather in prevention. The hygiene of the patient (preparation extending over several days), avoidance of violent purging or enemata given just before the operation, judicious feeding, warmth, attention to posture, and the use of regulating apparatus permitting the anaesthetist to control both the strength of the vapour and the quantity of the anaesthetic given were of the greatest importance. Oxygen should be given *pari passu* with the anaesthetic, and for nervous persons and those who were unable to sleep the employment of the morphine-scopolamine method was valuable, as it lessened the amount of anaesthetic required. Other alkaloids were less useful. Dr. SILK considered the long starvation often used before and after anaesthetics an important factor in producing shock. He ordered nutrient enemata to be given before operations in cases where shock seemed likely to be very severe. Once shock was established drugs were useless. Mr. LOCKHART MUMMERY thought the drug of the future in cases of anaesthesia shock was likely to be the infundibular portion of the pituitary gland. Morphine was valuable beforehand, at least in animals when anaesthetized by ether. Dr. BLUMFELD said the condition of the reflexes was helpful in distinguishing between surgical and narcosis shock. At the end of a long operation, such as that for excision of the tongue, the degree of shock, with pallor, was often extreme, but the brisk corneal reflex showed the low vitality was not due to the narcosis. Dr. BUXTON, in reply, said that cases in which a patient left the operation table in an apparently very favourable condition, but a few hours afterwards was the subject of extreme shock, were due to change of posture, and partly also to a fall of temperature on going from a hot theatre to a cold room. As for a routine treatment of severe collapse with failure of the respiration and circulation, he advised that the anaesthetic should be stopped, the patient inverted, the mouth opened with a gag, and Laborde's method of rhythmic tongue traction practised while oxygen was administered. If further treatment be required, artificial respiration by Howard's method should be performed, and saline solution infused by someone else while the anaesthetist was thus employed.

ROYAL ACADEMY OF MEDICINE IN IRELAND.

SECTION OF SURGERY.

Friday, February 19th, 1909.

SETON F. PRINGLE, F.R.C.S.I., in the Chair.

Oesophageal Diverticulum.

MR. WILLIAM TAYLOR read notes of a case of oesophageal diverticulum, which he had removed from a gentleman in June, 1908.

The patient was 54 years of age, and his symptoms dated back for about twenty years. The symptoms had been gradually getting worse. Food was usually regurgitated into the mouth just as it had been eaten, sometimes almost immediately, at other times after several hours. Not infrequently a portion of the previous night's supper was regurgitated next morning while in the bath. Pills taken at night were frequently regurgitated unchanged next morning. A feeling of fullness and discomfort after eating was generally referred by the patient to the right side of the neck, about the level of the hyoid bone. Attempts to pass bougies failed, their passage being arrested about nine inches from the teeth; but their passage seemed to be arrested more from spasm of the oesophagus than from encountering any other source of obstruction. There was no swelling to be detected on inspection of the neck. [A radiogram of the pouch filled with bismuth food was taken by Dr. Watson and shown, as well as the pouch itself. Through the "screen," before the photograph was taken, each bolus of food the patient attempted to swallow was seen passing into the pouch.] The pouch took its origin from the left side of the oesophagus just at its junction with the pharynx, and passed downwards behind the oesophagus, to terminate at a point just below the suprasternal notch. The diverticulum was removed through an incision extending from the hyoid bone along the anterior border of the left sterno-mastoid muscle to the sterno-clavicular articulation. The anterior belly of the omo-hyoid muscle and the superior thyroid vessels were divided. The lateral lobe of the thyroid gland, which was considerably enlarged, was displaced, after which the diverticulum was readily seen and withdrawn, there being no adhesions. Two small intestinal clamps were applied, and the diverticulum removed by dividing between them. The opening into the oesophagus was closed by three rows of fine silk sutures. A small tube was passed from the centre of the wound in the neck down to the region of the sutured oesophagus, and a piece of gauze loosely packed around it. About three-quarters of the neck wound was closed. The wound healed by first intention, except where the drainage had been applied, but even that was healed up by the end of twelve days. There was never at any time any sign of leakage from the oesophagus. All liquids by the mouth were withheld for four days. Rectal salines, with raw meat juice, were administered every six hours. Nourishment was given by the mouth on the eighth day, and gradually increased in amount and in consistency until a lamb chop was easily partaken of on the sixteenth day. The patient was now in perfect health, and had no difficulty in swallowing.

Mr. TAYLOR then briefly discussed the literature of the subject. After remarks by the CHAIRMAN,

Dr. MAGEE FINNY said the patient was under his observation for some years, and as far back as 1903 it was thought he had a pouch about his throat. It seemed reflexly to produce nervous irritation and dyspeptic phenomena. At his suggestion, Dr. Watson tried a meal of bread and milk for making a radiograph, and obtained excellent results. The same method had been tried on a patient approaching 80 years of age, and the radiograph which he exhibited showed a pouch corresponding to that in the former case. A later picture showed a lateral increase, and he would have another one taken shortly. They gave her the same mixture as Mr. Taylor used, and they could see it on the screen catching in the pouch and slipping down behind it.

Dr. MCVITTIE referred to a case of dilatation of the oesophagus, brought about by spasm, in which the patient was dying of starvation. By the use of Russell's oesophageal stricture dilator, which he exhibited, the patient was completely cured.

Mr. L. G. GUNN said he had a case which seemed an ordinary case of carcinoma of the oesophagus. He did a gastrostomy, and did not think the patient would live long. Thirteen months afterwards he was looking well and had put on weight. He then thought there was a diverticulum obstructing the gullet. Dr. Woods examined the case with the oesophagoscope, and snipped away a small portion of the stricture, which proved to be a carcinoma.

Mr. R. A. STONEY mentioned a case in which the diagnosis lay between malignant disease and some simple stricture of a syphilitic nature. He opened the stomach, which was small and adherent, and fed the patient with a tube from the mouth to the stomach. Later he had to do a duodenostomy. He subsequently lost sight of the case.

Mr. TAYLOR, in reply, said he had not passed a bougie since the operation was done. Oesophageal pouches of a pressure type were met with always at the junction of the pharynx and oesophagus, and he was convinced that unless in extreme cases, the shadows in a radiograph would not extend below the pericardium.

Suprapubic Prostatectomy.

Mr. L. G. GUNN read a paper on complications following on suprapubic prostatectomy. He mentioned especially fistula, impotence, persistent cystitis, formation of stone,

persistence of some frequency of micturition, impaired power of the compressor urethrae muscle, and uraemia.

The CHAIRMAN said a fistula would close rapidly, but as soon as the catheter was taken out the scar tissue would re-contract. For a few days after operation he generally used suction apparatus. He had come to look on hiccough in a prostatectomy case as a sure precursor of death.

Mr. WM. TAYLOR had recently been thinking whether they were not foolish in sticking to the suprapubic method, and not removing the prostate by the perineal route. Mr. Young's statistics showed 110 cases done in succession without a single death, and in 146 cases there was only one death. His own mortality was 8 per cent. to 10 per cent. He looked on the use of scissors as more or less unsurgical, even under one's eye, and to use them blindly did not appeal to him. Among the complications following the operation he had seen senile gangrene, arising, he believed, from a weak heart. He had also seen pelvic cellulitis follow, and he had seen a patient die apparently of haemorrhage and shock. He had found that cases in which he did not use suction apparatus did as satisfactorily as the ones in which suction was required. He now used nothing but a pad of wool, and the results were satisfactory. He looked on hiccough as a sign of uraemia, and consequently a fatal omen.

Mr. GUNN, in reply, said it was hardly fair to take the statistics of one man, who was an expert at an operation and selected his cases carefully. American statistics were not so good as the general English statistics, and impotence and troubles of a similar kind must be more frequent after the perineal than after the suprapubic operation. He thought it was better surgery to pass a curved scissors and cut through the sutures, than to drag them with the finger. In two cases of Bottini's operation which he had seen the results were completely satisfactory.

LIVERPOOL MEDICAL INSTITUTION.

Thursday, February 25th, 1909.

T. H. BICKERTON, M.R.C.S., L.R.C.P., President, in the Chair.

The late Professor Hamilton.

THE PRESIDENT referred to the loss accruing to the institution by the recent deaths of Professor D. J. Hamilton of Aberdeen, Drs. G. E. Walker, J. Tawse Nisbet, of Liverpool, and Dr. H. W. King of Chester, and expressed sympathy with their families.

Congenital Recesses of Lower Lip.

Mr. R. C. DUN read a note on three cases of congenital recesses of the lower lip. The condition in each case was associated with double harelip and cleft palate. No family histories of congenital deformities could be ascertained, nor were any other children of the families affected.

CASE I.—Two symmetrically-placed recesses were present on either side of the middle line of the lower lip, which was thickened and everted. From them sinuses ran downwards in the substance of the lower lip, ending blindly under the mucous membrane on its inner aspect. The sinuses discharged a mucous secretion.

CASE II.—A similar condition was present, but with in addition papillae at the orifices of the sinuses. Movements of protrusion and retraction were seen in the papillae.

CASE III.—Most unusual, only one similar having been previously reported. Instead of two sinuses there was present a single slot-like cavity in the lower lip ¾ in. in length and ¼ in. in depth. This child also showed a deformity consisting of a fold of mucous membrane passing from the inner aspect of the lower lip close to the angle of the mouth on either side to be attached to the alveolar margin of the upper jaw. Misplaced testis and torsion of the penis were also present in this case.

Mr. Dun reviewed the various theories which had been advanced to explain the presence of congenital diseases of the lower lip. None of them would adequately account for the mode of origin of the three different types of the deformity which had been met with. The condition was a rare one, only 38 cases having been previously reported. The note was illustrated by lantern slides.

MR. FRANK JEANS mentioned a case of congenital depressions, fistulae, in the helix. In the case of the auricle these "potential dermoids" had a definite developmental explanation.

The paper was also discussed by Mr. R. W. MURRAY and Dr. BLAIR BELL.

Spontaneous Rupture of Cyst-Adenomatous Ovarian Tumours.

Dr. BRIGGS read a paper on the spontaneous rupture of cyst-adenomatous ovarian tumours, in which he urged (1) that the primary cause of cyst rupture in cases of ovarian cyst-adenoma was tumour degeneration (necrosis); (2) that the rarity of cyst rupture in relation to the frequency of tumour degeneration was not inconsistent with the adequate vascular compensation almost invariably supplied by adhesions to the degenerated tumour; and (3) that these adhesions were simply reparative and not, as generally stated, the result of peritonitis. The innocent leakage through attenuated and thin cyst walls as a common and normal occurrence was excluded from the rare rupture; on the absence of clinical manifestations in the former and on their presence in the latter was based a working distinction. Cyst rupture as an appreciable clinical and pathological complication was one of the accidents in a case of an ovarian cystic tumour, and, just as in the case of accidental haemorrhage during pregnancy, trauma or violence in the history of its causation was almost invariably wanting. From the earlier and darker days of ovariotomy the records of sixty-six and eighty tappings of an ovarian cyst left no doubt as to the healing power of the normal cyst wall. Dr. Briggs quoted from Meredith and Spencer Wells evidence as to the vital activity and resistance of the peritoneum and to the absence of adhesions after tapping. Where there were neither infective organisms nor loose particles of growth capable of implantation, he argued that intraperitoneal cyst rupture—at the time unattended by serious haemorrhage—was of itself a harmless, or almost harmless, pathological process. On the other hand, degeneration of the cyst produced a permanent opening and a continuous dribble of cyst contents without any barrier of defence, such as was provided by the haematocele sac around a chronic tubal drip in a case of tubal mole. Where adhesions were universal around both innocent and malignant tumours, and after torsion of the pedicle, hydroperitoneum was invariably absent, and rupture was counteracted. Dr. Briggs narrated four cases of cyst rupture which occurred in his own practice, and submitted the following brief analysis from them:—In non-malignant cyst-adenomata the clinical manifestations were (*a*) of tumour degeneration: (1) impairment of health disproportionate to the size of the tumour, (2) abdominal pain, (3) variable distension of the abdomen, (4) irritability of the bladder, (5) irregular menstruation subject to the usual modifications of pregnancy, lactation, and the climacteric; (*b*) of rupture of the cyst: acute pain, recurrent pain, vomiting, the accumulation at a variable rate of free fluid in the abdomen. The diagnosis of cyst rupture by free intraperitoneal fluid could only be (1) positive when the partially filled cyst could be felt or when the previously firm cyst had completely collapsed; (2) presumptive when the clinical manifestations of degeneration and rupture had been obtained; and (3) occasionally and exceptionally when the free fluid was small in quantity and the rupture minute—both might escape detection before and during the operation of ovariotomy. The modern preference for removal of the tumour entire, if practicable, accounted for a long incision in Case IV, whereby both the 20 oz. of free intraperitoneal mucoid fluid and the dribble through the small aperture of rupture were exposed to view. The teaching of Matthews Duncan that, although the diagnosis of an ovarian tumour approached practical certainty, it was not one of scientific precision, applied also to the recognition of complications. The ovarian tumours of small size and the largest of only moderate size in the author's series of ruptured cysts had impaired the health of the patients to extents unusual for the size of each growth. Not one was malignant. The general peritoneum, so far as it was visible, was changed only in one—Case I—in which it was injected and thickened, but not shreddy. Finally, Dr. Briggs compared the mechanical influence, the loss of fluid, and the degenerative changes in ovarian growths to their respective effects upon the general nutrition of the patient. He argued that the benefits the patient often experienced during temporary recumbent rest were more consistent with degenerative changes than with progressive tumour growth in cases where inflammatory complications were absent.

The paper was illustrated with lantern slides and specimens.

The paper was discussed by Dr. BLAIR BELL. He had operated on two cases, and he thought diagnosis should be easy and prognosis good. He regarded it as a rare condition. Degeneration of the cyst wall, traumatism, or violent exertion might produce it.

Kissing the Book.

Dr. F. W. LOWNDES read a paper on Kissing the Book. He gave personal recollections of forty-three years' experience in various judicial courts. He gave instances of the insanitary and dangerous nature of the English method of taking the oath, which had been clearly proved to have caused disease in two cases, while this was only an infinitesimal proportion of the real number, which it would be very difficult to trace. He urged the abolition of the use of the "Book" and the substitution of the uplifted hand. While discussing the paper the PRESIDENT proposed the following resolution:

> That this meeting is of the opinion that the custom of kissing the Book on taking an oath is insanitary and dangerous and should be abolished, and the form of administering the oath with uplifted hand be adopted.

The resolution was seconded by Mr. R. W. MURRAY, and carried unanimously.

The paper was also discussed by Drs. S. GILL, T. R. BRADSHAW, F. BARENDT, A. G. GULLAN, SULLIVAN, W. B. WARRINGTON, and Mr. DAMER HARRISON.

Dr. LOWNDES replied.

NOTTINGHAM MEDICO-CHIRURGICAL SOCIETY.—At a meeting on March 3rd, Dr. P. BOOBBYER, President, in the chair, Dr. C. H. CATTLE read a paper on a case of *Landry's paralysis*. The patient was a colliery banksman, aged 23, and had taken alcohol to excess, as well as sat in wet clothes a week previous to the onset of the disease. This began with muscular pains, then he turned cold, sick, and dizzy, and complained of numbness at the tips of the fingers of both hands. The arms were next affected, and after them the legs and trunk. Then the eyelids and mouth muscles became weak; there was a little headache and a slight cough. The pupils were normal and the temperature practically normal throughout. The muscles were found to be weak or paralysed in whole groups, though not wasted. There was no reaction of degeneration, the reflexes were abolished, but everywhere sensation was normal. The muscles were extremely tender when grasped, and passive movements of the limbs were very painful. The bladder and rectum were not affected, and no bedsores occurred, although he was in bed continuously for six months. For a time the intercostal muscles were entirely paralysed, so that there was imminent danger of respiratory failure. Treatment resolved itself into strychnine and belladonna internally, and then strychnine alternately with sodium salicylate. Eventually he recovered sufficiently to be moved to an infirmary, where he now looked plump and well nourished, and could get about pretty comfortably with the aid of a wheeled chair. The paper was discussed by the PRESIDENT, Drs. R. WOOD (Ilkeston), F. H. JACOB, A. J. SHARP, and B. R. B. TRUMAN. Dr. CATTLE, replying, pointed out that the clinical type known as "Landry's paralysis" comprised a group of symptoms which might have a pathological basis varying in different cases. The earliest symptoms were sensory and were succeeded by progressive loss of muscular power, usually beginning at the feet and spreading upwards. There was no marked anaesthesia till a later stage, and death usually occurred in one to three or four weeks from the onset. As Landry himself had pointed out, and as had been recognized by the late Dr. Ross, the march of the disease was sometimes centripetal rather than centrifugal. In this case there was some doubt whether the lesions were in the spinal cord or the peripheral nerves; it was certain, however, that the symptoms were not due to rapidly ascending myelitis. As the action of the poison was undoubtedly selective of the motor-nerve fibres, the tenderness of the muscles was well accounted for by interstitial neuritis causing irritative and pressure changes in the sensory fibres adjacent to the motor ones. Dr. Cattle also showed a printer, aged 26, the subject of *Peripheral neuritis* of uncertain origin affecting the lower limbs, and now recovering under galvanic treatment, and, jointly with Dr. A. C. REID, showed (1) a man, aged 39, the subject of *Spinal syphilis*, partly asymmetrical and to a great degree permanent in its results. This case also bore some resemblance to syringomyelia, as Dr. Reid demonstrated. (2) A man of 62, exemplifying the later effects of syphilis in the shape of nuclear cerebral lesions, internal and external ophthalmoplegia, and neuritis of one leg.

HARVEIAN SOCIETY.—At a meeting held on February 18th, Dr. GRAHAM LITTLE read a paper on *Ionization in the treatment of skin diseases*. Cases of lupus vulgaris, lupus erythematosus, rodent ulcer, epithelioma, and pigmented, flat, senile warts, had been treated with zinc ions by means of a galvanic battery of twenty cells; 6 to 10 milliampères had been employed, most patients easily tolerating 7 milliampères. The positive pole had been connected with a chemically pure zinc electrode, covered with four to five thicknesses of gauze, sterilized by boiling, soaked in a 2 per cent. solution of zinc sulphate. The currents should be introduced gradually, and the electrode pressed firmly on the skin; if this were indurated, salicylic plaster, 25 per cent., was previously applied for several days. Each treatment lasted ten to twenty-five minutes; no severe pain had been caused. In a case of lupus vulgaris, in a delicate woman, a preliminary subcutaneous injection of cocaine had been useful in checking pain. In rodent ulcer, especially of the ulcerative stage, the treatment had succeeded admirably in at least four cases, in which *x* rays had comparatively failed. In lupus vulgaris the indurated lupus patch was thinned, and a good scar resulted, but the number of sittings was greater. The best results occurred in lupus erythematosus. The danger of promoting the spread of invasion was small. A case of epithelioma, arising from a pigmented naevus near the eye, had been successfully treated by zinc ions, after failure with *x* rays; in this case the proximity of the eye favoured ionization rather than *x* rays. Dr. LANGMEAD read a paper on *Infant feeding by undiluted citrated milk*. He said it was generally recognized that infants could not digest unmodified cow's milk. Hitherto all their attention had been centred on the excess of casein in cow's milk, which had been made responsible for the formation of the tough curd. The other important factor of coagulation—namely, the calcium salts, which were also in excess in cow's milk—was ignored. Sir A. Wright had shown that a flocculent curd could be produced if the excess of calcium salts were thrown down by the addition of 2 grains of sodium citrate to the ounce of milk. This method of feeding obviated the necessity of dilution, and consequently of adding more cream and sugar. Whole milk possessed certain advantages over diluted milk, for it was less bulky, and so less likely to produce distension of the stomach, and no cream need be added. The method, moreover, was simple, and little manipulation was required. He had used undiluted citrated milk for three years for his out-patients at the Paddington Green Children's Hospital. About seventy infants, who were not progressing on other methods of feeding, had been so treated, and of each of these a chart had been kept, recording the weights. The milk was always brought to the boil, and 2 grains of citrate of soda were added to each ounce. The results had been entirely satisfactory. All the infants who had continued to attend had gained steadily in weight, and no evidence of rickets or other untoward symptoms had occurred. He considered this method of feeding the best which they possessed. It could not, of course, be regarded as a treatment of acute disease, like acute epidemic diarrhoea. The weight charts of some of the infants so treated were shown. The paper was discussed by Sir A. WRIGHT, Dr. DAVIS, Dr. MILLER, Dr. PAYNE, Dr. WILLCOX, Dr. FINK, Dr. TURTLE, and Mr. LAMING EVANS.

THE following are the numbers of medical students in the various universities and faculties of France, as given in official statistics which bring the figures up to January 15th of the present year: Paris, 3,740; Marseilles, 347; Besançon, 31; Bordeaux, 825; Caen, 57; Clermont-Ferraud, 57; Dijon, 105: Grenoble, 82; Lille, 341; Lyons, 923; Montpellier, 586; Nancy, 353; Poitiers, 53; Rennes, 199; Toulouse, 452. The total number is 7,220.

Reviews.

THE PSYCHIC ELEMENT IN DISEASE.

IF it be true, as many writers have asserted, that the English as a race are becoming more prone to nervous irritability than heretofore, the fuller investigation and study of such subjects as neurasthenia and neurosis are not only interesting but necessary. Hence, a review of the subject as seen through the eyes of a French physician[1] is worthy of note, more especially when the methods of treatment which he advocates are diametrically opposed in some respects to those which have been generally accepted at home.

Dr. P.-É. LÉVY's book is written as a complement to a previous work on the rational education of the will, and is intended to show how such education may be applied for the relief and cure of the neurasthenic and the neurotic. The original work was published some ten years ago, and the present volume contains many papers that have already seen the light in French medical periodicals. The work, which is divided into two parts, deals first with the theories advanced by the writer and with the lines of treatment founded upon them, accounts of a few clinical cases in which his methods have been proved to be successful being given. The keynote of his teaching is the complete re-education of the will of the patient without the aid of isolation or restraint. He claims that good results can be as well obtained without these aids as with them, and that the period of treatment both for patient and doctor is less irksome. The symptoms induced by indefinite disorder of the nervous system must of necessity be vague; but one of them, at least, admits of more precise analysis, namely, pain. It is always a difficult matter to assess the value of pain as a guide to diagnosis, and to determine the extent to which it may be due to actual physical change. Even where a gross physical lesion may be evident there must always be a nervous element which may be modified, if not altogether removed, by judicious treatment. The methods advocated by Dr. Lévy amount, in fact, to suggestion by the physician after the patient's confidence has been obtained and his will power to some extent subordinated to that of his mentor. Such conditions as sciatica, where exaggerated pain is felt in association with a definite pathological lesion, admit of relief more quickly by suggestion and graduated exercise than by continued rest and palliatives. Rest is not always needed for the relief of the morbid condition, but is induced by the fear of pain, and if this can be removed by suggestion the resumption of ordinary movements conduces to the restoration of health.

In dealing with hysteria, the author does not advocate the use of hypnotism, as the results of compelling the will of the patient are not so good as those obtained by gentler means, smoothing over mental difficulties and gradually re-educating the mind. The actual methods adopted are not unfamiliar. The attention of the patient has to be secured, sometimes by mystic manipulation, and suggestion made with due confidence on the part of the operator. Such proceedings demand a considerable expenditure of time and patience on both sides, and it is obvious that they must be applied by a physician with full belief in his own powers and with plenty of time in which to exercise them. For the family doctor, to whom such cases of neurosis and neurasthenia usually come in the first instance, it would be an impossibility, but it is of vast importance that he should be able to recognize at the outset the relative part played by the psychic element. Cases of pseudo-appendicitis and pseudo-malignant disease are for ever on the increase, and it is possible that a better knowledge of the psychic treatment would lessen the number of instances in which the appendix is found by the surgeon to be itself free from disease.

The latter part of Dr. Lévy's book is mainly occupied in combating the prevalent views as to rest and isolation from relatives and home surroundings. He would treat his cases without interfering with their ordinary round of life, although forbidding access to obvious exciting causes, but he does not appear to recognize that the home surroundings themselves are often the main cause of the neurosis. The study of the psychic element in disease becomes more useful as life becomes more hurried and exciting, and the work before us should serve to stimulate study in that direction, whether the author's views be accepted or not.

[1] *Neurasthénie et Névroses; leur Guérison Définitive en Cure Libre.* By Dr. Paul-Emile Lévy, of Paris. Paris: F. Alcan. 1909. (Cr. 8vo, pp. 407. Fr. 4.)

FEEBLE-MINDEDNESS AND ITS CAUSATION.

IN a well-got-up volume, *Mental Deficiency* (*Amentia*),[2] dedicated "to all those persons of sound mind who are interested in the welfare of their less fortunate fellow-creatures," Dr. TREDGOLD has set forth an interesting account of the incidence, causation, pathology, mental and physical characteristics, social relationship, diagnosis, prognosis, and treatment of persons suffering from mental deficiency (amentia). The author, in his capacity of Research Scholar in Insanity and Neuropathology of the London County Council, as well as that of one of the medical investigators appointed by the Royal Commission to make inquiry in regard to the number of mentally-defective persons in certain districts (Dr. Tredgold's being Somerset), has had exceptional opportunities of studying the subjects of which his book treats practically, and much that appears in it is based upon original observations, which, however, he very fully compares with the experience of other workers in this field. For some of the statistical tables and illustrations he owns his indebtedness to such authorities as Dr. Caldecott of Earlswood and Dr. John Thomson of Edinburgh. An original drawing of types of brain cells occurring in amentia forms an appropriate frontispiece.

Limiting the connotation of "mental deficiency" to cases in which the mind has never attained normal development, the tables of the Royal Commission are quoted to show that its prevalence in sixteen selected districts of the United Kingdom ranges from a minimum of 1.1 in Cork to a maximum of 4.68 in Lincolnshire. By a series of calculations the author infers that in every 10,000 of the population of England and Wales there are (in whole numbers) 2 idiots, 7 imbeciles, 15 adults and 14 children designated feeble-minded, and 36 insane persons, such a prevalence showing that causation is a subject calling for the gravest consideration.

Dr. Tredgold prefers to classify etiological factors into: "(*a*) Intrinsic-Heredity," and "(*b*) Extrinsic-Environment," rather than to call them Congenital and Acquired. To nervous heredity he assigns the first place, finding evidence of it in 80 per cent. of over 200 cases he was able thoroughly to investigate. A pronounced history of family alcoholism he found in no less than 46.5 per cent., but he remarks that in five-sixths of these definite neuropathic heredity was present in addition. Tuberculosis, he considers, is rarely the direct and sole cause of amentia, though it often has "a very important indirect and contributory influence." To inherited syphilis he assigns comparatively small importance as regards mental defect, and to consanguinity of parents no more than is implied in accentuation of common morbid heredities. The importance of abnormalities of labour as a cause of amentia he considers to have been much over-rated. Some graphic charts of family histories serve to illustrate the relative influence of combined factors. As regards pathology, Dr. Tredgold states his conviction that "the essential basis of amentia is an imperfect or arrested development of the cerebral neurones," relegating gross anomalies and diseased conditions of the brain to a secondary place. Some useful tables of the clinical varieties of primary and secondary amentia in relation to their etiology and pathology, and of the anomalies associated with amentia, lead to a consideration of its physical, nervous, and mental characteristics, which are very systematically worked out.

Chapters follow treating of feeble-mindedness in children and in adults respectively, the definitions laid down and the statistics gathered by the Royal Commission being cited in this connexion. "Idiots Savants" are considered in a separate chapter, which is embellished with photographs of the handiwork of the "Genius of Earlswood Asylum." After a discussion of the social relations of

[2] *Mental Deficiency* (*Amentia*). By A. F. Tredgold, L.R.C.P.Lond., M.R.C.S.Eng., Consulting Physician to the National Association for Feeble-minded, and to the Littleton Home for Defective Children. London: Baillière, Tindall and Cox. 1908. (Demy 8vo, pp. 391 + xviii, plates xxix, figures 67. 10s. 6d. net.)

aments, methods of treatment and training are dealt with; and in the concluding chapter the problems of after-care, permanent segregation, and the prevention of propagation of the unfit are studied in the light not only of prudence but of practicability.

From the account we have given of the contents of the book, it will be seen that Dr. Tredgold has made a very comprehensive survey of his subject, more especially from the scientific and social sides. We are glad to have the valuable research work of the author gathered together into a convenient volume which is easy of reference, and which will be found most helpful to those wishing to gain an insight into the complicated problems of mental defect.

RADIUM AND RADIO-ACTIVITY.

MR. FREDERICK SODDY, Lecturer in Physical Chemistry and Radio-activity in the University of Glasgow, has published very opportunely, so far at least as the medical profession is concerned, a volume entitled, *The Interpretation of Radium*,[3] consisting of the substance of six popular experimental lectures delivered at the University of Glasgow last year. Mr. Soddy begins at the beginning, and pursues at first the historical method, giving an account of the observations of Becquerel, Roentgen, and Madame Curie; he then discusses fully, with descriptions of illustrative experiments, the rays emitted from radium, their relative penetrating power, and their behaviour in the magnetic field. He explains the practical effect from the radio-active point of view of spreading a minute quantity of a radium salt over a large area, showing that for practical purposes a thin film of a pure radium salt can be used to give alpha rays essentially free from beta and gamma rays, since the beta and gamma rays from so small a quantity are so feeble as to be practically negligible.

After describing in a general way the characters of the three classes of rays, he discusses at some length the nature of the alpha rays, and gives the grounds for the opinion that they are flights of swarms of helium atoms expelled from the radio-active substance at the almost inconceivable speed of 8,000 to 12,000 miles per second. He describes briefly the experiments by which it was shown in 1903 by Sir William Ramsay and himself that helium was a product of the radio-active change in radium, and gives a fuller account of his own recent research for the purpose of detecting the production of helium from the primary radio-elements—uranium and thorium. Finally he sums up the position as follows:

"Helium has actually been found to be produced from the various radio-active substances—radium, thorium, uranium, actinium—which have in common the fact that they all expel alpha-particles. The mass of these particles has been measured and found to agree with the mass of the helium atom. All alpha-particles have been proved to have the same mass and to differ only in the initial velocity of expulsion, whether expelled from radium itself, from the emanation, from actinium, uranium, thorium, or any other of the bodies which expel them. Hence we are justified in concluding that the alpha-particle is an atom of helium, or at least becomes one after the velocity with which it is expelled is lost and it is brought to comparative rest."

He therefore considers that it is justifiable to write the first disintegration suffered by radium somewhat as follows:

$$\text{Ra}\ \underset{226}{\left\{\begin{array}{c}\alpha\ \text{rays (helium)}\\ 4\\ \text{Emanation}\\ 222\end{array}\right.}$$

And adds:

"There is a great deal of evidence going to prove that one atom of a radio-active body expels but one alpha-particle at each disintegration. Hence, since the atomic weight of radium is 226, and that of helium 4, the atomic weight of the emanation is presumably 222."

At this point Mr. Soddy harks back to uranium, the probable ancestor, but not the immediate parent of radium, and then traces the history of the "emanation." Radium possesses the power of endowing objects with radio-activity, but this endowment of alpha, beta, and gamma rays quickly disappears. It is due to an invisible film or deposit on the surface of the object rendered radio-active, for, by sand-papering, the activity can be rubbed off, and then is found on the sand-paper. This "active deposit" is the product of the disintegration of the emanation. The atom of radium expels one alpha-particle (helium), and changes into the emanation, which is a gas, and the emanation expels a second alpha-particle (helium), and changes into a solid, or at least non-gaseous, form of matter. Then the active deposit itself passes through three changes with great rapidity, the bodies produced being known as radium A, radium B, and radium C. Radium B probably gives off beta rays; radium C, the final product of this stage, expels alpha, beta, and gamma particles. The beta and gamma rays or particles, therefore, do not come from radium itself directly, but from radium C, the end product of the change in the "active deposit."

Ra	Em	Ra A	Ra B — Ra C	Ra D
α	α	α		$\alpha\ \beta\ \gamma$
226	222	218	214 214	210
2,500 yrs.	5.3 days.	4.3 min.	38 min. 30.5 min.	17 yrs.

"Active deposit" rapidly changing.

Radium C after it has given off the rays becomes radium D, a comparatively stable body, which takes probably about seventeen years to change into radium E_1. Radium E_1 changes into radium E_2, and radium E_2 gives off beta and gamma rays and changes into radium F, the polonium of Madame Curie, an element which gives off alpha rays yielding another body, radium G, which is probably lead.

Ra D	Ra E_1	Ra E_2	Ra F (Polonium)	Ra G (? Lead)
$\beta\ \gamma$			α	
210	210	210	210	206
17 years	9.5 days	7 days	203 days	

We have endeavoured to give a general idea of Mr. Soddy's book in the hope that it may induce many to read it, because it affords by an orderly progression from the simple to the complex, and with as little mathematics as possible, a clear idea of the nature of the activity of radium, and the relation of that astonishing element to others which precede and succeed it in the process of disintegration or evolution—it is hard to know which term to use.

OSLER AND McCRAE'S SYSTEM OF MEDICINE.

THE fifth volume of Professor OSLER'S *System of Medicine* deals with *Diseases of the Alimentary Tract*, and opens with a discussion on the diseases of the digestive apparatus by Dr. Charles G. Stockton.[4] The chapter is thoughtfully written, but deals with a variety of questions which arise, and are more fully discussed under their special headings.

The second chapter, on diseases of the mouth and salivary glands, is by Dr. David Riesman. It is illustrated by several coloured plates, and, amongst other things, makes an attempt to deal with the changes of the tongue in disease, but this really important question is dismissed in a few lines. The peculiar tongue met with sometimes in persons who have been rickety in youth, described as like a map of France in departments, is not mentioned, nor is the exfoliating tongue seen in certain cases of hyperchlorhydria. Dr. John McCrae contributes a short chapter on diseases of the oesophagus, illustrated by three good photographs of pathological specimens.

The chapter on functional diseases of the stomach is by Dr. Julius Friedenwald, and in this group are included no fewer than twenty-four headings, which are dealt with in seventy pages, and consequently in a somewhat summary manner. As the phenomena presented by these neuroses are so multiform it is difficult to give any description that

[3] *The Interpretation of Radium.* By F. Soddy, M.A. The Progressive Science Series. London: J. Murray. 1909. (Demy 8vo, pp. 274. 6s. net.)

[4] Oxford Medical Publications. *A System of Medicine by Eminent Authorities in Great Britain, the United States, and the Continent.* Edited by William Osler, M.D., F.R.S. Assisted by Thomas McCrae, M.D., F.R.C.P.Lond. Vol. V, *Diseases of the Alimentary Tract.* London: H. Frowde, and Hodder and Stoughton. 1909. (Roy. 8vo, pp. 903. 30s.)

will satisfy everybody, but we should have thought there was no doubt about the existence of a form of gastralgia occurring in anaemic women where the pain follows the taking of food, and the symptoms are not unlike those of gastric ulcer, and one in which the pain comes on from fatigne during fasting, and is relieved by a dose of alcohol or by a good meal and rest. Einhorn's division into cases of gastric, central, neurotic, constitutional, and reflex origin, seems to be of comparatively little value, as it includes conditions such as "gastralgia due to cancer of the stomach" and "the gastric pains of cerebral tumour and myelitis." Flatulence might have been discussed under the heading pneumatosis, but only excessive cases of "flatulent distension, with dyspnoea, collapse, rapid and irregular pulse, and cyanosis," seem to be thought worthy of description; whereas no symptom is more common in all conditions of stomach derangement, and none better deserves careful analysis of its causes, such as its relation to defective teeth or the bolting of food. Akoria is, in our experience, more often related to gout than to neurasthenia or hysteria.

The chapter on organic disease of the stomach is by Dr. Charles F. Martin. In the discussion of the etiology of gastric ulcer Dr. Katzenstein's experiments might have been referred to, but it is possible the chapter was written before his paper was published. In the treatment of gastric ulcer Dr. Martin is on the side of those who give little food; he thinks that starvation is "good and often well borne," and that enemata of normal saline solution may replace food for "days or even weeks"; he is at least twice as long as necessary before allowing the patient to resume solid food, provided that all the previous stages have been passed through without pain or other untoward symptom. He is disposed to regard gastro-enterostomy as the ultimate remedy for ulcer of the stomach, while practitioners in this country, in spite of statistics, believe that a large proportion of cases get well under medical treatment. The early diagnosis of cancer of the stomach is the most interesting and important question in connexion with it, and there is much need of a critical discussion of all the various means that have been advocated of recent years to help in diagnosis, but we note as omissions any reference to the value of absence of rennin or to the test suggested by Graefe and Roehmer of the haemolysins present in the contents of carcinomatous stomachs. Speaking generally, the dietetic treatment is more that of Germany than of England. It is somewhat disappointing, in connexion with stomach dilatation, to find the writer speaking of the stomach as containing an "abnormally large quantity of food" after a test meal. Where dilated stomach with retention of contents is suspected, he presumably examines the stomach from six to eight hours after a test meal, when normally he should find it empty, and to speak of an "abnormally large quantity" suggests that normally there is a small quantity present, whereas there should be nothing but traces of mucus and a few epithelial cells. The importance of these small quantities as a means of diagnosing pyloric obstruction and of indicating the need for surgical interference can hardly be over-estimated, and we should have liked to have seen this more clearly stated.

The chapter on diseases of the intestines is contributed by Dr. Alfred Stengel. Considering the importance of feeding by the bowel, absorption in the large intestine was worthy of discussion, but is dismissed in seven lines. There is some confusion in the mode in which phantom tumour is described; there are, of course, two kinds, and both are mentioned, but as if they might coexist or were much the same thing, whereas they are essentially distinct. Confused ideas on this subject are frequently met with amongst students, for while nearly all know of the general distension of the abdomen described by gynaecologists as phantom tumour or pseudocyesis, they know nothing about the form described by Murchison due to contraction of the straight muscles of the abdomen. In the discussion of constipation, no reference is made to the distinction drawn by some authors between atonic and spastic constipation. The indications for surgical treatment in appendicitis are more conservative than might have been expected from what we know of American practice, but no definite rules are laid down to guide the practitioner.

The chapter on diseases of the peritoneum is by Dr. H. D. Rolleston, and contains an excellent account of all that should be included under this heading.

Dr. Thomas R. Brown has written the chapter on the various ptoses. He does not describe the narrow thorax and small costal angle, the *habitus enteroptoticus*, which has been so generally accepted in Germany as an important element in the production of these conditions. He repudiates the view that any general symptoms are dependent upon nephroptosis, and does not speak favourably of the results of surgical treatment.

Dr. Eugene Opie, who writes on diseases of the pancreas, does not, we notice, give any results of personal observations with Cammidge's reaction. He appears to overestimate the importance of the state of the islands of Langerhans in diabetes, since Dale has shown that they are not permanent structures, but vary in number with the state of the digestion.

The liver and its diseases are described by Dr. O. A. J. Kelly. He accepts the view that jaundice is always obstructive, but says nothing about those cases in which, while there is a yellow discoloration of the skin and conjunctivae, no bilirubin appears in the urine, the so-called "acholuric jaundice," while he repeats the old mistake of saying that the absence of bile causes constipation. We note that he believes with Dr. Hale White that ascites in cirrhosis of the liver is a terminal symptom, and that where the patient has survived to allow of repeated tappings the ascites is due to chronic peritonitis.

It may be said generally that the several articles in this volume are well written and include most of what should be known at the present time upon the various subjects with which they deal. The main defect, inseparable apparently from modern textbooks, is the want of clear guidance on disputed points. A more dogmatic presentation of such questions would be more instructive, or, at least, more impressive, to the minds of students than this judicial balancing of views, which leaves them indisposed to trouble their memory with doctrines about which there seems to be so much doubt.

PUNCTURE FLUIDS.

AFTER introductory chapters on chemical and physico-chemical methods of analysis, Dr. GRUNER, in his *Studies in Puncture-Fluids*,[5] discusses the characters of the various effusions encountered in clinical work. One of the points to which he calls attention is the differentiation of fluids presenting a turbulent, opalescent, or milky appearance. Where the turbidity is due to chyle, the discovery of fat globules under the microscope, or the fact that ether will render the fluid clear, makes the diagnosis easy. But in what the author terms "pseudo-chylous" ascites, the turbidity may be due to a variety of causes. Occasionally it is to be accounted for by the presence of enormous numbers of bacteria, even in non-septic effusions; the use of a Chamberland filter will then procure a clear filtrate. Sometimes the turbidity may be due to a molecular alteration of the globulins present, possibly associated with a combination of globulin and a fat, forming a lecitho-globulid. Excess of mucin, again, may give rise to a milky or opalescent appearance, especially if the electrolyte conditions do not allow of its complete solution. Sometimes it is found that after a first tapping has brought out a clear, translucent, typically straw-coloured fluid, a subsequent tapping reveals a decidedly milky fluid. The author investigated a case of this sort in which the only change found *post mortem* was extreme cloudy swelling of the convoluted tubules of the kidneys. As neither chyle, bacteria, nor lecithin were present to account for this phenomenon, he suggests that the change was due to an alteration in the physical properties of the colloids, explicable in the light of modern knowledge regarding the chemistry of proteids. "If a change in the electrical charge takes place by which the attraction between colloidal particles and ions is altered, then the former may form aggregates of a size sufficiently different from those in the first tapping to make the fluid turbid." At the end of the volume Dr. Gruner provides an interesting collection of cases in which his chemical and physical examinations of

[5] *Studies in Puncture-Fluids. A Contribution to Clinical Pathology.* By O. C. Gruner, M.B. London: H. K. Lewis. 1908. (Demy 8vo, pp. 289; ill. 14. 7s. 6d.)

pleural and peritoneal fluids are discussed in relation to to the clinical and *post-mortem* findings. The chemistry of pathological effusions is very difficult and complicated, and, as Dr. Gruner remarks, the number of variable factors at work is so great that it is often impossible to establish a positive and certain diagnosis as to the nature and origin of the particular fluid investigated. But though his methods and his results may not always be of immediate clinical utility, they possess a high scientific interest, and we hope that his researches on this important subject will be continued.

PATHOLOGICAL HANDBOOKS.

The *Textbook of General Pathology*, by Drs. Beattie and Dickson,[6] is an attractive book, well written and well illustrated. The text bears the impress of original research, and the illustrations, which are new and specially prepared for the work, are a welcome change from the semi-diagrammatic, conventional pictures often handed down from one textbook to another. In so far as the book is intended for the average student, it may, perhaps, be objected that the authors give a little too much prominence to matters which they find important from their own point of view, and rather overlook ordinary examination requirements. We by no means recommend the cramming system, but authors of textbooks are bound to bear in mind the desirability of helping the student to assimilate readily all that he is required to know, and not overburdening him with details which are probably beyond his grasp. Take for example, pp. 20–25, on the composition of protoplasm. It is impossible for the ordinary medical student, with his limited knowledge of organic chemistry, to understand a classification of "proteins" into protomines, histones, sclero-proteins, conjugated proteins, etc.; nor can he be expected to grasp the meaning of "mono-aminomonocarboxylic acids," "heterocyclic compounds," and the like. And in dealing with such subjects as inflammation and the classification of tumours, it must be remembered that the beginner requires a general outline rather than special emphasis on certain aspects of recent research or scientific controversy. Disputed points about "plasma cells" or Maximow's "polyblasts" are beyond his need; and there are possibly even examiners who might feel their omniscience rudely challenged by such terms as "epilepidomata" or "mesohylomata." The authors "propose to adopt practically in its entirety" what they consider to be "the most complete and scientific classification" of tumours; but unfortunately there are several other quite different classifications which are also considered by their respective inventors to be "the most complete and scientific." Until pathologists have arrived at some consensus of opinion on this question of classification, writers of elementary textbooks do not appear to be justified in inviting the student to adopt any one of these recently advanced theories. The omission of some of these disputed or highly technical points would have left the authors space to deal with other and more important subjects which the student expects to find discussed in a textbook on general pathology. There is no chapter on pyrexia; surely this is a serious omission. "Into the general subject of gout and the chemistry of uric acid metabolism we do not propose to enter." With regard to these and other important questions, which arise directly out of clinical work and are constantly raised in the examination room, we are compelled to point out that the student will find himself better catered for in other textbooks on general pathology. We hope that in a future edition the authors will see their way to giving fuller consideration to the student's point of view. What they have written is good; and, with a relatively small amount of cutting down in some directions and expansion in others, they might greatly increase the utility of their work.

In his book on the outlines of general pathological histology, Dr. Julius Steinhaus[7] provides a useful course of practical instruction in histological technique and diagnosis. The methods of fixation, section cutting, and staining are carefully described, and the list of formulae for differential stains is particularly full and useful. The descriptions of the various pathological lesions encountered under the microscope are brief, condensed, and likely to be helpful to the student going through a laboratory course in pathological histology. Dr. Steinhaus attaches special importance to his photomicrographs, and considers that good photographs are of greater educational value to the student than drawings. We admit that his photographs are good, and that many of them are useful, but we consider that many important details of microscopic work need for their portrayal the work of a skilled artist, and connot be reproduced adequately in the best of photographs. Though photographs are better than the fanciful, diagrammatic, and conventional drawings often handed down from one generation of textbooks to the next, they are less instructive than really good drawings which faithfully reproduce typical lesions as they are actually seen under the microscope.

Professor Orth's *Pathologisch-anatomische Diagnostik*,[8] which has now attained its seventh edition, is of particular interest as representative of the teaching in the Pathological Institute of Berlin. The special feature of the book is that its aim is eminently practical. In the first chapter the technique of making a *post-mortem* examination is explained, and in all the succeeding pages the appearances found in the *post-mortem* room are taken as the starting point, every tissue being described in the sequence observed in making a systematic investigation of the dead body. This is an excellent plan, and might be imitated with advantage by the writers of English textbooks, many of whom give the student no instruction on the art of dissection in the diagnosis of disease. Professor Orth enters fully into the naked-eye appearances of morbid tissues, and also gives a good account of the microscopic details in so far as these are necessary for confirming a diagnosis. His descriptions are concise and clear, and the thoroughness with which he covers the ground is admirable. Students who assimilate Professor Orth's instructions may feel confident that they have nothing more to learn in the art of making an exhaustive and reliable *post-mortem* examination.

THE HISTORY OF SPECIAL HOSPITALS.

The origin, rise, and development of special hospitals have recently found a historian in Mr. Richard Kershaw, the Secretary of the Central London Throat and Ear Hospital.[9] The story that he has to tell is of more than common interest, and might well have been extended beyond the narrow limits of seventy-eight pages.

Specialism has sometimes been described as a "modern tendency," but to the student of ancient history it must appear a revival. In the days of Herodotus the treatment of disease in Egypt was almost entirely in the hands of specialists, and, although much of it depended upon faith in the powers of the particular deity, there is abundant evidence in the papyri and in the bodies of mummies that physical remedies and manipulative skill were used by specialists with judgement and success. Mr. Kershaw traces, in an early chapter, the more important epochs in the history of medicine, and illustrates them by some interesting archaeological photographs, some of which have already appeared in the published lectures of Dr. Richard Caton at the Royal Institution and the Royal College of Physicians. One of these will demonstrate the fact that "balcony" treatment was even more fully utilized in some of the ancient Greek temples of health than at the present day.

A chronological record of the growth of special hospitals in the United Kingdom during the nineteenth century shows that, like so many of the general hospitals, they owe their foundation to individual medical enterprise. It cannot be said that philanthropy was in all cases the moving spirit, but there can be no doubt that the multiplication of such institutions has relieved much sickness and promoted the study of disease.

[6] *A Textbook of General Pathology.* By J. Martin Beattie, M.A., M.D., and W. E. Carnegie Dickson, M.D., B.Sc., F.R.C.P.Edin. London: Rebman, Ltd. 1908. (Demy 8vo, pp. 491; 162 illustrations and 4 coloured plates. 17s. 6d.)

[7] *Grundzüge der allgemeinen pathologischen Histologie.* Von Dr Julius Steinhaus. Leipzig: Akademische Verlagsgesellschaft. 1909 (Imp. 8vo, pp. 170, with over 150 photomicrographs on 25 plates. M.10.)

[8] *Pathologisch-anatomische Diagnostik.* Von Dr. Johannes Orth. Siebente, durchgesehene und vermehrte Auflage. Berlin: August Hirschwald. 1909. (Roy. 8vo, pp. 789, 438 illustrations. M.16.)

[9] *Special Hospitals.* By Richard Kershaw, Secretary of the Central London Throat and Ear Hospital. London: Geo. Pulman and Sons, Ltd. 1909. (Roy. 8vo, pp. 78.)

The London Fever Hospital was the first to be established, followed shortly afterwards by "Moorfields," and from their lead a series of special hospitals was started in each succeeding decade, until at the present time they number 167. In those of London alone there are no less than 3,171 beds. The influence of these centres for special study has been far-reaching. The better knowledge of fevers and their treatment, the more accurate study of dermatology and neurology, the scientific advances in the fields of ophthalmic, aural, and laryngeal surgery, may be cited, amongst other benefits, as directly due to the opportunities afforded by special hospitals. The names of Lawrence, Erasmus Wilson, Spencer Wells, Toynbee, Peacock, Charles West, and Elizabeth Garrett Anderson will always be held in remembrance as pioneers whose labours have paved the way to success for the present and future generations of specialists.

That the educative value of specialism has of late years been increasingly appreciated, is shown by the return, here recorded, of the attendance of students, post-graduate and other, at the chief clinics in London. A quotation from the memorable address delivered by Sir James Paget to the Congress of 1881 sums up the case in favour of specialism in terms as conclusive as they are eloquent.

Mr. Kershaw, true to his instincts as secretary to a special hospital, labours to prove that they can be worked more economically than general hospitals, but he admits that the data for exact comparison are not entirely trustworthy. He advocates the system of small payments by lower middle-class patients, and does not regard the liability to abuse by patients of a higher grade with any apprehension, so long as the services of an almoner endowed with common-sense are available.

The small work, admirably presented by the publisher, is concluded by a tabular statement of all the special hospitals in the United Kingdom, with some interesting statistics as to their value as educational centres.

PUBLIC HEALTH LAW AND BY-LAW.

THE object aimed at by the promoters of the Public Health Acts Amendment Act which came into force on January 1st, 1908, was to enable sanitary authorities outside London to obtain, when they so desired and without the expense of promoting a private bill, various additional powers which had been included in local Acts passed in recent sessions of Parliament. The Act is an adoptive one, and before it can be adopted by any sanitary authority the Local Government Board in England and Wales, or the Chief Secretary to the Lord Lieutenant in Ireland, must be satisfied that the adoption is desirable for the particular district concerned. An admirable explanation of the Act, with a very full commentary on the various sections, has been written by Mr. ARTHUR E. CLERY and Dr. J. MCWALTER.[10] The text of the Act is given, each section being followed by appropriate comments, explanations, or references suitable to it. The second half of the work includes a summary of recent decisions of the courts with respect to sanitary matters; this is very clearly and intelligibly written, and in each case precise references are given to the full reports. We believe that up to the present time only very few sanitary authorities either in England and Wales or in Ireland (the Act does not apply to Scotland) have taken steps to adopt any portion of the Act. If those who are responsible for advising such authorities will carefully read this explanatory volume, we feel confident that many of them will see the necessity for urging the adoption of the Act within the area of their districts.

The very handy little *Handbook of Sanitary Law* brought out by Dr. Burnett Ham nearly ten years ago has achieved popularity mainly on account of accuracy and ease of reference, two qualities which have been well maintained in the fifth edition, edited by Dr. R. KING BROWN and Dr. JOHN EYRE.[11] The sections upon dwellings and buildings and upon housing of the working classes are especially clearly written, and not the least useful chapter is that which deals with definitions, where the bewildering terms "drain" and "sewer" are defined as lucidly as is at all possible in the present state of judge-made law. The Public Health Acts Amendment Act, 1907, is referred to in the chapter on nuisances, but the provisions of the Act which relate to common lodging-houses and infectious diseases are not given under these headings. The Infectious Disease (Notification) Act and the Infectious Disease (Prevention) Act are, we believe, the correct titles of these two Acts, and not those used in the *Handbook*. The general arrangement of the book is excellent, and the printing leaves little to be desired. The editors seem a little uncertain whether to spell Mr. Wynter Blyth's name with a final "e" or not, and one of them does not appear to be quite sure whether his own name is R. K. Brown or K. W. Brown. We believe it is the former.

With the aid of a large number of well-executed diagrams, Mr. JENSEN, assisted by an unnamed collaborator, has succeeded in producing a most helpful work upon the by-laws of the London County Council as to drains and sanitary fittings.[12] In this second edition he has included the new by-law which deals with the giving of notices and depositing of plans before carrying out any proposed work made under the Metropolis Management Acts Amendment (By-laws) Act, 1899. The annotations are clearly expressed, and give in clear language the reasons which have led to the adoption of particular regulations. The diagrams are not confined to illustrations of recognized appliances, but include a large number which are dangerous and therefore not permissible. References are freely made to by-laws in force in other large towns, including Liverpool, Manchester, and Birmingham. The necessity for adopting in the construction of drains some material which will stand the pressure and vibration caused by the modern methods of traction is becoming more and more apparent. The advocacy by Mr. Jensen of cast-iron drains in towns is therefore opportune.[13] He discusses the matter very fairly, and although upon points of detail there may some ground for disagreement with his views, there can be no doubt that his general conclusions are correct. The initial cost of laying iron pipes would undoubtedly be greater than that of stoneware drains, but in the long run they would probably be more economical.

NOTES ON BOOKS.

THE twelfth volume of the reissue of the *Dictionary of National Biography*,[14] edited by SIDNEY LEE, takes the work from Sir Gruffydd Llwyd, a Welsh hero of 1322, to William Mason, the Irish statistician. Among the longest biographies are those of Mary I, the first queen regnant of England; Mary II, the wife of William III; Mary of Modena, the wife of the father of Mary II; and Mary Queen of Scots. Close by is a short note on William Marwood, whose claim to inclusion is that he was the public executioner from 1871 to his death in 1883. Among the medical names we note Sir James Ranald Martin, who, born in Skye and educated in medicine at St. George's Hospital, spent many years as surgeon in the H.E.I.C.S., and finally enjoyed a large consulting practice in London; Sir Henry Marsh, a distinguished physician of Dublin; Dr. James Mackenzie, of Worcester, who helped Lady Mary Wortley Montagu to make known the uses of inoculation before the discovery of vaccination; and Sir James McGrigor, the chief of the medical staff of Wellington's army in the Peninsula, and afterwards, from 1815 to 1851, Director-General of the Army Medical Department, in which capacity he inaugurated the medical reports and returns from all military stations, which later resulted in the annual army medical report. The thirteenth volume, which made its appearance this month, comes down to John Myles, founder of Welsh Baptist churches, who afterwards (1663) emigrated to New England. Among the longest biographies in this volume are those of Milton, Sir Thomas More, and General Sir John Moore, the centenary of whose death at Corunna has recently been commemorated. But it contains a fair sprinkling of medical names—among others, that John Moore, the father of the General, who

[10] *The Public Health Acts Amendment Act, 1907.* By Arthur E. Clery, LL.B., and J. McWalter, M.A., M.D., D.P.H. Dublin: E. Ponsonby. 1908. (Crown 8vo, pp. 395. 2s.)

[11] *A Handbook of Sanitary Law.* By B. Burnett Ham, D.P.H., M.D., M.R.C.S., L.R.C.P. Fifth edition. London: Ash and Co. (Fcap. 8vo, pp. 183. 2s. 6d.)

[12] *By-Laws as to House Drainage and Sanitary Fittings made by the London County Council.* Annotated by Gerard J. G. Jensen, C.E., and Another. Second edition. London: The Sanitary Publishing Company, Limited. 1908. (Cr. 8vo, pp. 147; 109 illustrations. 3s. 6d.)

[13] *Cast Iron House Drainage.* By Gerard J. G. Jensen, C.E. London: The Sanitary Publishing Company, Limited. 1908. (Crown 8vo, pp. 218; 185 illustrations. 4s. 6d.)

[14] *Dictionary of National Biography.* By S. Lee. Vols. xii and xiii. London: Smith Elder and Co. 1909. (Roy. 8vo, pp. 1,349. 15s.)

was for a time assistant surgeon to the Coldstream Guards, serving with them at Flushing and Poseda in 1748, but afterwards practised in Glasgow, where he graduated M.D. in 1770. He afterwards travelled with the Duke of Hamilton, visiting Voltaire at Ferney, and Frederick the Great in Berlin. He published an account of his travels, wrote the once famous novel, *Zeluco*, and corresponded with Burns. A greater name is that of Dr. Richard Mead. It is rather a Scottish volume, the Maxwells, the Melvilles, the Millars and Millers, and the Murrays claiming a good deal of space.

We received on March 3rd the volume of the Transactions of the first International Congress on Psychiatry, Neurology, Psychology, and After-care, held at Amsterdam in September, 1907.[15] It is edited by Dr. VAN WAYENBURG, who was Secretary-General of the Congress, and contains the text in the original language of the various papers read in the general meetings and sections.

The thirty-third volume of the *Transactions of the American Gynecological Society* covers the proceedings of that body at its annual meeting at Philadelphia in 1908. Altogether some twenty-five papers find place, most of them being of a decidedly practical character. The special feature of the volume as a whole is the number of papers devoted to the question of immediate versus delayed operation in cases of ruptured tubal pregnancy. They were followed by a good discussion. The President dealt in his address with the conduct of general anaesthesia, making charges against the profession which fortunately have little or no application on this side of the water. One would gather from his statement that the anaesthesia specialist has not yet been evolved in America; the selection of intelligent nurses for such work is spoken of as an advance to be fostered.

The Frontiersman's Pocketbook[16] has been compiled and edited by ROGER POCOCK on behalf of the Council of the Legion of Frontiersmen. The Legion of Frontiersmen is a civilian, self-supporting, and self-governing association, officially recognized in the United Kingdom, Canada, Australia, South and East Africa, and Bombay, as a means of securing for the service of the State men of good character, who have been trained in wild countries, at sea, or in war. The council registers such men in view of their individual usefulness to a field force as guides, scouts, craftsmen, and irregular mounted rifles. In each country throughout the British Empire, so far as the authorities permit, units are being raised for home defence, and, where men can be spared, for service in Imperial defence in time of war. The pocketbook consists of five parts: I, the training of frontiersmen; II, means of travel; III, collective training; IV, morale; and V, information as to simple medical and surgical treatment when no doctor can be obtained; finally, the book has an index, which might with advantage be fuller, and some blank pages for notes. The contibutors to the first four parts are a numerous band, who, in various capacities, have had experience of frontier life, and have been forced by practical necessity to know how best to act in various emergencies, and how to utilize means which happen to be available when approved appliances are not at hand. The information ranges from cooking to the church service, and from the making of knots to the identification of a man-of-war, with, at the end, a short disquisition on camp manners. Part V is also the work of many hands; it is arranged alphabetically, and the information, illustrated by first-aid diagrams, is given in a highly condensed form. It seems, as far as we have tested it, to be thoroughly sound, but probably in another edition it would be thought well to give the Schäfer method of resuscitating the apparently drowned now adopted by the Metropolitan Police. The book is of a kind of dwarf quarto shape, bound in leather, and is convenient for the pocket.

[15] Amsterdam: J. H. de Bussy. 1908. (Roy. 8vo, pp. 994.)
[16] *The Frontiersman's Pocketbook*. Compiled and edited by R. Pocock, on behalf of the Council of the Legion of Frontiersmen. London: J. Murray. 1909. (Med. 16mo. pp. 483. 5s.)

MEDICINAL AND DIETETIC PREPARATIONS.

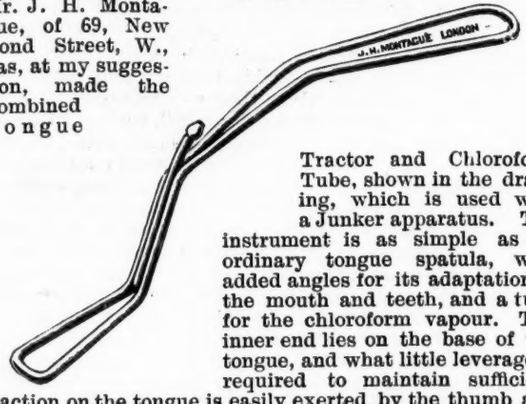
A Soluble Compound of Veronal.

ALTHOUGH one of the most recently introduced of the many hypnotics prepared synthetically, veronal (diethyl-barbituric acid) has attained to considerable favour, and is now very widely employed. In common with other articles of this class, however, it is insoluble in water, and certain limitations are thus imposed on its use. To meet this objection the soluble sodium derivative of veronal has been prepared by Mr. E. Merck under the name "veronal-sodium." It is a dry, white crystalline powder, soluble, according to our experiments, in about five parts of water at ordinary temperatures; the solution is almost tasteless, strongly alkaline in reaction, and the addition of acid at once produces a precipitate of veronal. Veronal-sodium appears well adapted for the administration of the drug by rectal injection; when given by the mouth the acid contents of the stomach would no doubt cause the precipitation of veronal, which, however, might then be more readily absorbed than if administered in the form of powder. Veronal-sodium is also supplied in tablets of 5 grains and 7½ grains each.

MEDICAL AND SURGICAL APPLIANCES.

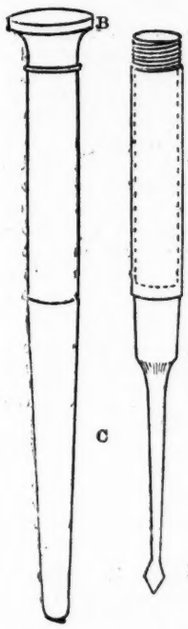
Combined Tongue Tractor and Chloroform Tube.

MR. FREDERIC LONGHURST (Anaesthetist to St. George's Hospital and the Grosvenor Hospital for Women) writes: The task of controlling the patient's tongue, thus securing a free airway and at the same time avoiding interference with the surgeon's aseptic precautions, is, in certain operations requiring difficult anaesthetic positions of the head, less easy than it should be. In such an operation as that for goitre, in which the head has to be kept in the straight line and generally extended, the tongue in most cases causes difficulty by falling back against the posterior wall of the pharynx, and the general methods in use for obviating this complication are: (1) Levering the tongue forward with the flat of a tongue forceps, and at the same time administering the chloroform through the tube of a Junker inhaler; (2) getting the tongue forward by pushing the angles of the jaw; (3) tongue traction by means of a ligature. All these methods are clumsy, probably interfere with the operator, and leave no free hand to work the bellows of the Junker. These difficulties are greatly accentuated in patients of bad anaesthetic type, such as the short-necked plethoric, the overhung jaw, the adenoid, etc. With the object of trying to overcome these troubles, Mr. J. H. Montague, of 69, New Bond Street, W., has, at my suggestion, made the Combined Tongue Tractor and Chloroform Tube, shown in the drawing, which is used with a Junker apparatus. The instrument is as simple as an ordinary tongue spatula, with added angles for its adaptation to the mouth and teeth, and a tube for the chloroform vapour. The inner end lies on the base of the tongue, and what little leverage is required to maintain sufficient traction on the tongue is easily exerted by the thumb and forefinger on the handle, which will be opposite the patient's forehead. In my experience the tongue tractor appears to obviate the necessity of a gag or mouth prop; but should the latter in any subsequent cases be found useful in keeping the lips apart, it could, of course, be used in conjunction with it, though, for the reason given above, I have refrained from complicating the instrument by any such addition. The part of the tractor which lies against the teeth is covered with rubber. The tractor once in position, the mouth can be covered with sterilized gauze, and no interference with the surgeon's aseptic precautions should be necessary throughout the operation. There are, of course, many operations in which it is difficult to control the tongue without interfering with the operator, such as operations on the face, neck, ear, head, etc., and in all these cases the tractor will, I think, be found useful. I have found the administration of chloroform greatly facilitated by it, not only in the most difficult of these cases, but also in operations on other parts of the body remote from the head. The advantages claimed for the appliance are that: (1) It secures a patent airway in operations when the position militates against one; (2) it obviates the necessity of interfering with the surgeon's aseptic precautions; (3) the position of the head and neck need not be altered during the operation for the purpose of securing the airway; (4) it leaves one hand entirely free or working the bellows.



An Ophthalmic Vade-Mecum.

Dr. EDGAR WHITAKER (Diss) writes: I have designed an instrument to fill the want, so frequently felt by practitioners, of an appliance ready to hand for extracting a foreign body from the cornea, painlessly and quickly. It is made the usual size of a silver pencil (3¼ in. long), and, as is seen in the drawing, the flat top serves as a seal, whilst the whole instrument lends itself to general purposes of various utility, without impairing its efficiency, and gives excuse for its constant presence. It consists of a small hollow barrel (A), on the top of which screws the cap (B). This barrel has a cavity which exactly receives a tube of ophthalmic tabloid cocain. The lower part of the barrel is graded off into a fine, but firm, spatula (D) for the removal of the foreign body, whilst the cover (C) effectually prevents injury to this part of the instrument. Messrs. Burroughs and Wellcome have made it for me extremely well in silver and at a most reasonable price.



Anaesthetic Emergency Case.

Dr. A. DE PRENDERVILLE (Senior Anaesthetist to the London Throat Hospital, etc.) writes: The hypodermic case, shown in the accompanying sketch, has points of interest which, I venture to suggest, are worthy of special attention at the hands of practitioners generally and of anaesthetists in particular. Anyone who has, unfortunately, had occasion to face a sudden crisis during a surgical operation must have keenly felt the need of drugs ready for *instant* use. The case is fitted with nine "sterules" (sterile capsules), prepared with the utmost care. Each sterule contains a single dose of the required drug. The following selection from a list of some 100 formulae in vogue is suggested, but may be modified at will to suit individual requirements: Adrenalin, camphor in ether, digitalin, ergotin, strychnine, and scopolamine-morphine. One or two of the special injections may be kept in duplicate. A metal syringe and a glass tube of Schimmell's needles are also contained in the case. It is unnecessary to emphasize the great importance of having clean, unused needles for separate injections. Mr. W. Martindale, 10, New Cavendish Street, W., has elaborated my original idea for me, and has, I think, produced a very useful and valuable outfit for hypodermic medication. All the fittings are of metal, and can, of course, be sterilized by boiling.

A Lacrymal Cannula.

Dr. G. F. C. WALLIS (late Bristol Eye Hospital) writes: Messrs. Weiss and Co. have made for me the lacrymal cannula as illustrated. It is bulbous-ended like a Couper's probe, and has the opening laterally, which obviates blunting the smooth olivary end, thus allowing of easy passage from the canaliculus into the lacrymal sac. The tube is of soft metal, and can be shaped to any desired curve.

Comedo Expresser.

Not being quite satisfied with the comedo expressers at present in use, Dr. Pernet has had a larger instrument made by Messrs. Mayer and Meltzer. It is in the shape of

a blunt fenestrated curette, slightly bent at the end, and altogether a little over 4 in. long. In the figure it is shown three-quarter size.

REPORTS ON THE ACTION OF NEW DRUGS.

AT the last meeting of the International Association of the Medical Press a discussion took place as to the position of medical men who received fees from manufacturing chemists or chemical firms for investigations of the action of new drugs. A similar discussion had previously taken place in Cologne at the meeting of the German National Association. The chief chemical firms had at that time expressed themselves in sympathy with the association, and as prepared to lend their aid in any reasonable manner.

In the *Deut. med. Woch.* of December 10th, 1908, a "round robin," signed by the following firms, gives the details of the steps which they are taking in this matter:

Aktiengesellschaft für Anilinfabrikation, Berlin.
C. F. Boeringer and Soehne, Mannheim.
Chemische Fabrik auf Aktien, vorm. E. Schering, Berlin.
Chemische Fabrik Güstrow, Güstrow i. M.
Chemische Fabrik von Heyden, Radebeul, near Dresden.
Farbenfabriken, vorm. Fr. Bayer and Co., Elberfeld.
Farbewerke, vorm. Meister Lucius and Brüning and Co., Höchst.
Gehe and Co., Dresden.
Gesellschaft für Chemische Industrie, Basle.
F. Hoffmann-La Roche and Co., Grenzach i. Baden.
Kalle and Co., Biebriche a. Rhein.
Knoll and Co., Ludwigshafen a. Rhein.
E. Merck, Darmstadt.
Pearson and Co., Hamburg.
J. D. Riedel, Berlin.
Schülke and Mayr, Lysolfabrik, Hamburg.
Dr. Theinhardt's Nährmittel Geselischaft, Cannstatt-Stuttgart.
Vereinigte Chinin-fabriken Zimmer and Co., Frankfurt a. M.

The Union of Chemico-Pharmaceutical Industrial Firms, of which those enumerated above are members, state that the union condemns the principle of paying fees for public reports on new drugs by medical men. The firms we have named realize that they must protest energetically against the unwarranted suggestion that they have any pecuniary interest in the publication of these articles. It is, however, to their interest that each pharmacological preparation should be subjected to a thorough and careful investigation by experts of good repute. Such a investigation is absolutely necessary to the advance of medicinal therapeutics. The firms in the list we have quoted do not consider that it is any concern of theirs to express an opinion with regard to the payment of medical men for undertaking these investigations. They are of opinion that no honourable member of the medical profession could be influenced in his judgement of preparations by the reception of a fee, and they add that the question should not be confounded with that of writing favourable notices on drugs for gain.

The condemnation expressed in the first sentence of the last paragraph will be greeted with approval by all who are interested in the matter.

MOTOR CARS FOR MEDICAL MEN.

TRICARS.

P. C. asks for information as to the suitability of tricars for medical use, and especially for the personal experience of any doctor who has used them. Our usual motor correspondent has neither personal experience in their use, nor any printed matter available to send to "P. C." for his information. Speaking generally, tricars have not attained to much popularity, and are not reputed to be very safe, especially in taking corners at any pace.

CAR FOR ROUGH ROADS.

MOTOR, writing from the Orange River Colony, asks if any of our readers have experience of the Holsman car or others of similar construction. These have a high clearance, are built for solid tyres, and have air-cooled engines. Solid tyres would probably be an advantage in the Colony provided that the car is built for them, and has appropriate springs. But, in the absence of actual experience, we doubt the advisability of an air-cooled engine, for it is when struggling with difficulties such as a steep hill with a bad road, or clambering out of a watersplash or a gully, that all engines get overheated and lose power. Since air cooling is largely dependent upon the car travelling rapidly through the air, it is just in such conditions that it would be least efficient.

LITERARY NOTES.

IN the *Daily Graphic* of March 8th Mr. Herbert Sieveking gives an interesting account, with illustrations, of Tyburn, where so many unfortunate people, sinners and saints, suffered in the bad old days before Romilly cleansed our Statute Book of the blood which stained nearly every page, and before the growth of religious toleration made theological belief cease to be *un cas pendable*. Admirers of Hogarth will remember the ghastly print which brings the "Rake's Progress" to a close. Mr. Alfred Marks has shown in his book, *Tyburn Tree: its History and Annals*, which is based on exhaustive research, that Tyburn was a place of execution for nearly six hundred years. The first time the death penalty was exacted there was in 1196, the last in 1783. The London County Council has decided to erect a memorial at the junction of Edgware Road, Bayswater Road, and Oxford Street. This will take the form of a triangular stone with a representation of the gallows (which was triangular) in brass. The stone in the roadway will be surrounded by a 6 ft. triangle with the inscription in brass letters, "Here stood Tyburn Tree. Removed 1759." The determination of the site of the gallows has been made possible by the discovery by Mr. Sieveking of a map of the parish of St. George, Hanover Square, dated 1725. Mr. Sieveking, who is a son of the late Sir Edward Sieveking, is a member of the medical profession.

Epilepsia is the name of an international quarterly journal devoted, as its title imports, to the publication of researches and observations on epilepsy and allied disorders. It will be published in English, French, and German. The founder of the new journal, which is published by Scholtema and Holkema, of Amsterdam, and I. A. Barth, of Leipzig, is Dr. Julius Donath, of Vienna, who is also the editor. The Editorial Secretary is Dr. L. Muskens, of Amsterdam. The first number contains original articles by Professor Raymond and Dr. Sérieux, of Paris; Professor Binswanger, of Jena; Professor Redlich, of Vienna, and Dr. L. Muskens.

Dr. Ralph W. Leftwich writes:

> I notice that the authors of the two able articles on exophthalmic goître in the JOURNAL of February 13th use the synonym Graves's disease as is usually done in this country. In Germany it is always termed "Basedow's disease," his description, though five years later, being the more exact. A third claim has been set up in favour of a Dr. Parry.
>
> It is pretty clear, however, from the passage I am about to quote that the conjunction of the three symptoms—enlarged thyroid, exophthalmos, and mental soundness—was well known to the ancients. I came across it in Brachet's *Dictionnaire Etymologique*. "Goître du Latin *gutter* (autre forme de guttur). Gutter signifie proprement *gorge*, mais il a le sens de goître dans la latinité de la décadence; car on trouve son dérivé *gutturosus* employé au sens de goîtreux dans Ulpien: '*Si quis natura gutturosus sit, aut oculos eminentes habeat, sanus videtur.*'" This, I suppose in contradistinction to the mental infirmity of cretins, the term "*sanus*" being evidently inapplicable to the body. Ulpianus died A.D. 226.

It is certain that "gutturosus" meant a person with a goître. But we do not think that the passage quoted by Dr. Leftwich proves that exophthalmic goître was known to the ancients. The whole text is as follows:

> Digest, XXI: 1: 12. Ulpianus libro primo ad edictum aedilium curulium. Qui clauum habet, morbosus est: sed et polyposus. Eum, qui alterum oculum aut alteram maxillam maiorem habet, si recte iis utatur, sanum videri Pedius scribit: ait enim inaequalitatem maxillarum oculorum bracchiorum, si nihil ex ministerio praestando subtrahit, extra redhibitionem esse. Sed et latus vel crus brevius potest adesse impedimentum: ergo et hic erit redhibendus. Si quis natura gutturosus sit aut oculos eminentes habeat, sanus videtur. Item sciendum est scaevam non esse morbosum vel vitiosum, praeterquam si inbecillilate dextrae validius sinistra utitur: sed hunc non scaevam, sed mancum esse. Is cui os oleat an sanus sit quaesitum est: Trebatius ait non esse morbosum os alicui olere veluti hircosum, strabonem: hoc enim ex illuuie oris accidere solere. si tamen ex corporis vitio id accidit, veluti quod iecur, quod pulmo aut aliud quid similiter dolet, morbosus est.

The technical meaning of *redhibere* is to throw back bad merchandise on the vendor's hands. It appears likely, therefore, that the passage deals with the purchase of slaves, and the reasons which justify the buyer in refusing delivery. Possibly it may refer to fitness for military service, but Ulpian does not give the text of the edict of the Curule Aediles on which he comments. In any case we think the word "sanus" simply means "sound" or fit for service, and has nothing to do with the absence of the mental degeneracy of cretinism.

We have seen many complaints as to the irreligious teaching that is forced on the children in France under the present régime. It is said that history is deliberately falsified in the interest of Republican freedom and fraternity. It appears that in some textbooks, at any rate, scientific medicine and its professors are almost as roughly handled as what are called clerical prejudices. Dr. Good, of La Motte-Saint Héraye, in a letter addressed to the *Concours Médical*, gives some instructive examples from a classbook on domestic economy written by a Madame Sage for the use of girls in upper primary schools. He says his daughter, aged 15, who is preparing for her certificate examination, had called his attention to the following remarkable statements:

> The terms employed by doctors are sometimes strange; these gentlemen love to use peculiar and high-sounding language. They seriously speak of a footbath as a pediluvium; of lard as axungia, etc. Modern medicine should leave aside these quackish ways, and speak in common language.

Again:

> Doctors do all they can to make their prescriptions as difficult to read as possible; a doctor who should write legibly would lose his prestige. Truly these are ways belonging to another age.

How the gifted authoress herself can talk in language understanded of the people is shown by her advice to girls from 15 to 16 years of age. They are taught that the "expulsion of waste liquid matters should be made as soon as the desire to do so is felt in order to preserve to the *muscles of contraction* all their sensibility"! No mention seems to be made of gaseous products, but if the like Republican freedom is to be applied to the expulsion of these, a new edition of the learned work of "M. Ortiunus," mentioned by Rabelais as having been found by Pantagruel in the Library of Saint Victor at Paris, and entitled, *Ars honeste petandi in societate*, will be required. How modern are Madame Sage's notions of medicine are one gathers from statements like the following:

> Corns on the feet are cured by the application of house leek.
>
> * * * * * *
>
> When one is stung by an insect, it is enough in order to conjure away the inflammation to rub the wounded part with the leaf of a leek; if the wounded part becomes inflamed, and swells, one must forthwith apply the actual cautery, either red or at white heat, put a bandage on the limb above the sting . . . and have oneself taken to a *pharmacist!*

Madame Sage's explanation of the intensification of itching in scabies at night, "surprise by himself," as Count Smorltork would say. The girls are told it is because the acarus takes care of its health by knocking off work during the day! The lady's knowledge of the character of the parasite is perhaps derived from familiarity with the ways of the modern working man and his careful limitation of output. Among other things the victims of Madame Sage's instruction are expected to learn is an *olla podrida* of pathology, in which microbes, ferments, toxins, etc., are mixed like the ingredients in the witches' cauldron in *Macbeth*. In a chapter devoted to preventable diseases cerebro-spinal meningitis finds a place. The way to safeguard yourself against this formidable affection is as easy as lying: "One must wash one's hand after having touched the various eruptions seen on the skin of patients suffering from the disease." The young girls are also taught about plague, cholera, psittacosis, and *puerperal fever*. Well may Dr. Good complain of having to pay for such a book issued by official authority. If Madame Sage's work is to be taken as a type of the classbooks put into the hands of the future mothers of France, one may look forward to a generation which will hold the doctor in the same contempt as it is taught to hold the priest. As in Lavoisier's day, *La République n'a pas besoin de savants.*

Messrs. John Bale, Sons, and Danielsson, Limited, are publishing a translation of the second edition of Bandelier and Roepke's work, entitled *Tuberculin in Diagnosis and Treatment*. A coloured plate of the local tests is given, and eighteen charts illustrating the tuberculin reaction and the course of tuberculin treatment.

Nova et Vetera.

THE STUDY OF MEDICINE IN THE BRITISH ISLES.

DR. NORMAN MOORE is a many-sided man. In his youth he had the good fortune to come under the influence of Charles Waterton, who fostered in him a love of natural history. Later he attracted the favourable attention of Charles Darwin, whom to know was in itself a liberal education in biological science. He has earned distinction as a pathologist and a physician, and he is now Senior Physician to St. Bartholomew's Hospital, a position which must be peculiarly congenial to him for sentimental as for other reasons, for he has given much attention to antiquarian investigations. His well-deserved reputation in this field marked him as especially fitted to succeed Dr. Payne as FitzPatrick Lecturer to the Royal College of Physicians of London. We had the privilege of publishing two of these lectures at the time of their delivery.[1] Dr. Moore recently issued his FitzPatrick Lectures in a handsomely printed and illustrated volume.[2] In it is embodied a vast amount of original research among the records of the past, digested into a form easily assimilable by any one who has a taste for such studies.

We have often dwelt on the importance even to the self-styled "practical man" of a knowledge of the history of his art. Such knowledge would, for one thing, save him from rediscovering truths known to Galen, devising instruments and appliances described by Celsus and Paul of Ægina, and inventing operations performed by Hippocrates. But more important than this is the knowledge of the evolution of medical science, which shows how the art of recognizing and treating disease has been perfected, the obstacles that have stood in the way of pioneers, and the manner in which they have been overcome. The history of medicine is indeed an object-lesson in the method of furthering knowledge, indicating at once the misleading tracks to be avoided, and the path to be followed in the search for truth.

Dr. Moore carries the history of the study of medicine in this country onwards from the period where it was left by Dr. Payne, who dealt with medicine in Anglo-Saxon times. He shows us how the Norman influence for a time overshadowed that of the native mediciner. He cites the names of several physicians, both lay and clerical, who flourished in London in the twelfth and thirteenth centuries, and gives a kind of medical register of those practising in the reign of Henry III, collected from the writings of Matthew Paris. He thinks it clear that considerable attainments were required before a man was styled *medicus* or *physicus*. If his study was, as Chaucer said of a somewhat later type, "but little on the Bible," it was almost entirely on medical books compiled from the writings of the ancients, and on commentaries on those books by teachers in the universities. A smattering of medicine seems to have been considered a part of the equipment of a learned man, whatever might be his line of intellectual activity. The clergy not only studied but practised the art of healing. King John was attended on his deathbed by the Abbot of Crokestone, who opened his body after death, not, however, with the object of discovering the nature of his disease, but that the corpse might be more decently carried. Richard Grosseteste, the scholarly Bishop of Lincoln, was famous for his medical lore. Among the contents of the libraries of monasteries and cathedrals there were always books on medicine. The library of St. Augustine's Abbey at Canterbury contained ten of the fifteen writers who formed the library of Chaucer's physician, and the catalogue of Christ Church in the same city includes over two hundred and eighty medical works.

Although hospitals in the Middle Ages were mainly institutions for the shelter of the poor and for the accommodation of pilgrims, provision was also made for the care of the sick. In proof of this we have the testimony of Jacobus de Vitry, who, writing of France in the thirteenth century, speaks of the many associations of men and women who had withdrawn from the world and lived according to the rule of St. Augustine that they might minister to the poor and to the sick. Dr. Moore points out that the frequent contrast in the statutes of these bodies between *sani* and *infirmi* shows that they cared for the sick as well as for the poor. He says that several ancient records indicate that St. Bartholomew's Hospital in London was arranged on the same plan as the French hospitals. In proof of this he quotes a passage from the Close Rolls of Henry III dated March, 1341, which shows that the hospital was intended for the reception of all sick poor until they got well of their ailments, and pregnant women till they had recovered from the effects of their travail. A passage in the will of Gilbert Chaumpneys, dated 1375, and preserved in St. Paul's Cathedral, seems to indicate that "the hospital of St. Thomas the Martyr in Southwark, which now flourishes in Lambeth under the tutelage of St. Thomas the Apostle," provided shelter for the sick.

Dr. Moore takes the writings of John Mirfeld as illustrating the nature and extent of the studies of a physician of the fourteenth century. Mirfeld was a resident in the priory of St. Bartholomew in Smithfield, which was established in the reign of Henry I by Rahere, the founder of the famous hospital which he placed under the patronage of the same Apostle. Mirfeld learned medicine from a master attached to that hospital, of whose practice he gives several examples; he seems also to have attended medical lectures at Oxford. His chief work is entitled *Breviarium Medicinae*; a full account of it, with reproductions of pages of the two extant manuscript copies, is given by Dr. Moore. The book was compiled in the monastery of St. Bartholomew, and is divided into fifteen parts—the first dealing with fevers; the second with affections of the whole body; the third with affections of the head, neck, and throat; the fourth with those of the chest; the fifth with those of the abdomen; the sixth with those of the pelvic organs; the seventh with those of the legs; while the eighth is devoted to boils; the ninth to wounds and bruises; the tenth to fractures and dislocations; the eleventh to joints; the twelfth to simple medicines; the thirteenth to compound medicines; the fourteenth to purgatives; and the fifteenth to the care of health.

We cannot follow Dr. Moore through his interesting summary of all these, but we may note one or two points by the way. One is his ingenious explanation of the frequent injunctions that certain prayers should be said in making up and in applying remedies. Mirfeld, he says, wrote in a religious house at a time when clocks were scarce and watches unknown, and the recital of prayers or psalms, in addition to its appropriateness to the place, was useful as a fairly accurate measure of time. In treating of injuries Mirfeld expresses regret that medicine and surgery should have become separated, because a man cannot be a good physician who knows nothing of surgery, while a surgeon ignorant of medicine cannot be a master of his art.

In another work, entitled *Florarium Medicinae*, Mirfeld anticipates some of the advocates of bedroom exercises at the present day. He recommends prelates to have a rope, knotted at the end, hanging from the ceiling of their study, and to swing and raise themselves on it. Dr. Moore sums up Mirfeld's professional character as follows:

> In universal humanity towards the sick, and in the wish to alleviate pain and to consider the feelings of the patient, those essential parts of our profession without which the highest skill can never be attained, he was equal to the physician of to-day. He was imperfectly trained in the art of observation, and was inclined to accept without examination the dicta of great teachers of medicine. . . . [He was] a physician of wide reading, with a mind full of all that was known in his time, a laborious and high-minded man, anxious to do all in his power for his patients and to instruct others how to relieve suffering.

As for Mirfeld's medical knowledge, we are told that in medicine he was capable of recognizing the general condition of fever and of distinguishing clearly a few species of disease in which fever occurs—the plague, for example, and tertian ague. He could distinguish to some extent the manifestations of diseases which we call pleurisy and bronchitis. He knew that dysenteric symptoms were not all due to the same cause. He had names for several distinct skin diseases. He had some knowledge of enlarge

[1] See BRITISH MEDICAL JOURNAL, vol. ii, 1905, pp. 1332 and 1385, and vol. ii, 1906, p. 1404.

[2] *The History of the Study of Medicine in the British Isles.* The FitzPatrick Lectures for 1905–6. Delivered before the Royal College of Physicians of London. By Norman Moore, M.D. Oxford: At the Clarendon Press. (Pp. 202.)

ment of the lymphatics. He was as well acquainted with epilepsy as most physicians were up to the days of Trousseau. He had observed hemiplegia clinically. He could recognize gout. He knew something of dislocations and fractures. He understood the value of exercise and of rational diet for the preservation of health, and was certain of the ill effects of intemperance. He mentions "sour milk" among the preservatives against pestilential diseases. He was acquainted with some of the effects of opium, of turpentine, of sulphur, and of some other drugs. He understood the necessity of attention to the details of nursing, and was aware of the importance of remembering the effect of the mind on the body. From this it is evident that John Mirfeld may fairly be taken as an example of the best type of English physician of the fourteenth century.

Next we come to Thomas Linacre, the founder and first President of the London College of Physicians, who played a considerable part in reviving a knowledge of Greek, and thus helped to bring about the Renascence. He was, perhaps, more humanist than physician, but he did valuable service to medicine by translating directly from the original Greek works of Galen and other old writers, whose teaching, in the course of translation from Arabic versions into Latin, had become changed as much as Ménage's *Alfana* in its migrations from *equus*. In this way Linacre, though he did not shake himself free from the shackles of authority, helped others to do so by showing the method of observation practised by Hippocrates and the Greeks of the best periods of Hellenic intellectual development.

The translations of Linacre and John Caius opened the way to the study of medicine by the only method that can lead to the discovery of truth. At the beginning of the seventeenth century men began to turn again to Nature, and to look at her not through the spectacles of antiquity, but with their own eyes. The work of Harvey, Glisson, and others was the outcome of the new method; but Hippocrates and Galen continued to hold the minds of men in bondage till long after their day, and even the ridicule of Molière, one of the greatest reformers of medicine, did not kill the blind faith in the ancients which had stood in the way of medical progress for so many centuries.

As an illustration of the professional training of physicians in the seventeenth century, Dr. Moore gives an account of the education of Edward Browne, eldest son of the author of the *Religio Medici*. Browne was educated at Cambridge, where he had the advantage of being under the eye of Glisson. At Cambridge, and afterwards in London, he witnessed a few dissections of the human subject, and he dissected some animals with his own hand. He prosecuted his studies at Paris, Montpellier, and at Padua, where he worked mainly at anatomy. After travelling through many other countries he returned to London, where he became President of the College of Physicians. Summing up Browne's medical studies, Dr. Moore says:

> He could write and speak Latin. After taking his M.B. degree he continued his anatomical studies, and worked practically at zoology, botany, chemistry, and pharmacology, and at medicine, parts of surgery, and morbid anatomy. He learned French and Italian, and could speak a little Greek. He used every opportunity of conversing with learned men, such as Swammerdam the zoologist, Glauber the chemist, and Lambecius the bibliographer. He had read widely. . . . Besides his university examination, which was a kind of disputation, Edward Browne was no doubt examined in this college for admission as a candidate in 1668, after he had been engaged in medical studies for about ten years. He took his M.D. degree at Oxford in 1667, when he had studied nine years, and in his own university in 1670. This degree was probably given on proof of study in the faculty. The studies were less regulated, and the practical work less precise than those of a physician in our time. There were as yet no organized schools of medicine in England, and except in this college there was no thorough examination of candidates.

In regard to clinical observation, Dr. Moore says that Caius was the first in England who described a disease from Nature. In his *Liber de Ephemera Britannica*, the preface of which is dated 1555, he gave an account of the sweating sickness. Harvey made notes of some of his cases, but the first writer in this country whose works bear evidence of close clinical observation was Sir Theodore Turquet de Mayerne, a Swiss who settled in London in 1611, and was appointed first physician to James I. Mayerne left twenty-three volumes of notes of cases, which are among the Sloane Manuscripts in the British Museum. A selection from his notes was published in 1700 by Dr. Joseph Browne. Among Mayerne's notes is an account of the fatal illness of Henry Prince of Wales, who died in 1612, from which it is easy to gather that the illness which cut short a life full of promise was typhoid fever. "So excellent," says Dr. Moore, "are the notes of Mayerne, that it is fair to say that nothing but the pathology of his time prevented him from being the first recognizer of enteric fever." Mayerne also left an account of the health of James himself, which is not only interesting as a clinical record, but important as a historical document. We learn therefrom that the "Solomon of the age," as he was called by his flatterers, scoffed at medicine as made up of conjectures, and useless because uncertain, and had a mean opinion of doctors. In some points the "wisest fool in Europe," as he was described by his tutor George Buchanan, was, perhaps, more enlightened than his learned leeches. Thus he would never allow himself to be bled; it is possible, however, that this may have been due as much to his well-known horror of cold steel as to any reasoned objection. He disliked purging and for a long time would not allow the administration of an enema. In this he showed a stronger will than Louis XIV, who, as shown by the *Journal de la Santé du Roi*, kept by his physicians Valot, Daquin, and Faquin, was ruthlessly purged, drugged, and bled, throughout his life. James's low opinion of physicians may have been founded, like that of Molière, on the fact that he suffered from many infirmities from which probably he got little relief from medical art. He may, perhaps, have taken a pleasure in teasing his physician as Napoleon did with Corvisart. Mayerne has also left records of the health of Anne of Denmark and Queen Henrietta Maria, who evidently had great confidence in his skill.

Another clinician of note whom we can claim wholly as our own was Francis Glisson, author of the famous treatise on rickets which appeared in 1650. Then came Sydenham, whose name is a household word in medicine, and Morton, the author of *Phthisiologia*. In the eighteenth century the most famous names in English medicine were those of Radcliffe, who, though himself no scholar, showed his appreciation of learning by his munificent benefactions to Oxford; Garth, author of *The Dispensary;* John Arbuthnot, deemed by many the greatest, as he certainly was the most learned, of the wits of Queen Anne; Freind, Hans Sloane, Mead, Floyer, and Heberden, one of Samuel Johnson's physicians, whose *Commentarii de Morborum Historia* is the last important medical treatise published in this country in Latin.

Dr. Moore gives a brief but interesting account of medicine in Ireland and Scotland. He gives sketches, each with its characteristic touch, of Sir Thomas Molyneux, whom he calls the first great physician in Ireland; of Dr. John Stearne, one of the original Fellows of the Irish College of Physicians; and of Dr. Richard Helsham, Regius Professor of Physic in the University of Dublin, a friend of Swift, and a correspondent of Arbuthnot. Dr. Moore gives an account of the hereditary physicians of Ireland and of their manuscript literature, to the study of which he has brought the learning of a physician and the special knowledge of a Celtic scholar. In Scotland there were also hereditary physicians. The systematic teaching of medicine began at the University of Edinburgh in the early part of the eighteenth century, and its introduction was largely due to the efforts of Alexander Monro who had studied under Boerhaave. During the eighteenth century the influence of Boerhaave was dominant in Scotland. His teaching, as expounded by his disciples, laid the fame of the University of Edinburgh as a school of clinical medicine. Thus, while the study of clinical medicine among English physicians had its origin in the new learning of the Renascence, in Scotland it was primarily imported from Holland.

This necessarily brief summary of Dr. Moore's book will, we hope, induce readers interested in medical history to study it for themselves. Only in that way will they be able to form an adequate conception of the recondite learning which forms its framework, and of the literary skill with which the dry bones of antiquarian lore are made to live in its pages. He has undone the work of

Time, which, as Sir Thomas Browne says, antiquates antiquities and hath an art to make dust of all things. The book is a monument of which not only the author but the college of which he is a prominent member may well be proud.

MALARIA IN ITALY.

THERE appeared recently in the *Times* an interesting letter by Professor Osler in which he justly described what has been effected in Italy towards the mitigation of the scourge of malaria as a lesson in practical hygiene. The Italian Society for the Study of Malaria was founded ten years ago, and the results of its work in that period are summed up in the following paragraphs from its decennial report just issued, which are quoted by Professor Osler:

The society has improved the prophylaxis of malaria, and has introduced into practice the new mechanical measures based on the defence of the habitation and the individual from the bites of mosquitos. This being a relatively expensive procedure, the society has occupied itself chiefly with the improvement of the antiplasmodic prophylaxis—the administration of quinine.

For this purpose it has promoted and defended legislation for the gratuitous distribution of quinine to the poor and to all workers in malarial localities.

In order to render possible the prophylaxis and to prolong the treatment, it has prepared the quinine in its most agreeable forms, namely, that of comfits and chocolates, the latter containing tannate of quinine, which has little taste, and is better tolerated by children.

The results have been that since 1902, when the law on State quinine was promulgated, while the consumption of quinine has been yearly increasing, the mortality from malaria has diminished from about 16,000 to about 4,000 yearly; and in the army, Custom House offices, and in some communes where the new laws have been better applied, the morbidity from malaria has greatly diminished.

By these measures, says Professor Osler, and "by means of the agricultural and agrarian transformation of the land and colonization, rather than by the destruction of mosquitos (a thing impossible to be done by us on a large scale)," Italy may be freed from the scourge. He goes on to give a sketch of the history of discovery in respect to malaria, in which he speaks of the "old suggestion" of Lancisi that the disease is transmitted by the mosquito. Lancisi did, indeed, in his book, *De noxiis Paludum effluviis*, published in 1717, ask whether "among the living effluvia of marshes there are not some more minute than others which may find their way into the blood vessels and there multiply injuriously"; and he recommended that the blood drawn from persons suffering from ague should be examined with the microscope and the insects found therein (*si qua sint*) closely scrutinized. But the suggestion is much older than the eighteenth century. Varro, writing in the first century before Christ in his book on agriculture, in speaking of the choice of a building site, says that the neighbourhood of marshes is to be avoided, because there grow therein "certain minute animals, invisible to the eye, which gain access to the body through the mouth and nose." Columella, who lived in the first century after Christ, giving counsel on the same subject, says that marshes breed "animals armed with noxious stings, which fly at us in thickest swarms." Professor Osler goes on to speak of the Panama Canal zone, which he says is an astounding witness to the success of modern sanitary measures against malaria. The monthly reports of Colonel Gorgas give a death-rate (among nearly 50,000 workpeople) lower than that of any large city; it has been as low as 12 per 1,000. The final establishment of the truth that malaria is transmitted by mosquitos is a notable triumph of the experimental method.

AT a meeting held at the Cultusministerium in Berlin on February 18th, under the presidency of Cabinet Councillor Dr. von Behr-Pinnow, which was attended by representatives of the district centre and the international bureau for the protection of infancy, it was decided to form a national committee for the care of nurslings. The committee is intended to be a central council for the consideration of the measures adopted independently by individual corporations. A German association for the care of nurslings has been founded and will hold its first general meeting in June of the present year.

Medical News.

A COMMITTEE for the investigation of hospital abuse is now in session in the Central Offices of the Assistance Publique, in Paris.

MR. HENRY PHIPPS, of New York, has given more than £200,000 for the purposes of the psychiatric clinic at Johns Hopkins University, Baltimore.

MR. EDGAR TAUNTON, M.B., F.R.C.S., D.P.H., Deputy Medical Officer of Health of Bethnal Green, has been called to the bar at the Inner Temple.

AN anonymous benefactor has recently given, through Dr. John H. Musser, £40,000 to the University of Pennsylvania for the establishment of a department of medical research.

THE Harveian Lecture of the Harveian Society of London will be delivered by Mr. A. J. Pepper next Thursday. It will deal with thirty years' hospital experience and practice.

AT a meeting of the Medical Society of London next Monday evening there will be a discussion on the relation of medical men and coroners. It is to be introduced by Sir Victor Horsley.

THE Royal Mail Steam Packet Company has published an illustrated booklet given particulars of the Easter pleasure cruises that can be made by its steamers to Spain, Portugal, Gibraltar, Morocco, Canary Islands, and Madeira.

THE epidemic of measles still continues in Birmingham, and twenty-three schools have been closed on account of it. In the week ending March 6th 42 deaths occurred from measles, as compared with 43 in the preceding week. No doubt the cold, snowy weather had a good deal to do with the large number of deaths.

A DINNER of a somewhat remarkable character was given to Dr. John B. Deaver of Philadelphia on February 14th. The peculiarity of the dinner is that it was given by more than 150 doctors who had been successfully operated on for appendicitis. A loving cup was presented to Dr. Deaver on the occasion.

IT is announced that by the beginning of the next school year in September the London Education Committee hopes to have established children's care committees for all elementary schools in London, in order to arrange for their apprenticeship or for finding them good permanent employment where there is a prospect of advance.

ARRANGEMENTS have been made for lectures on tropical subjects to be delivered to nurses at the London School of Tropical Medicine, Royal Albert Dock, E. Any qualified nurse may attend the course, whether she intends proceeding abroad or not. The first course will commence October 15th, 1909, and will be taken by Mr. Cantlie, Dr. Daniels, Dr. Andrew Duncan, Dr. R. T. Leiper, Dr. J. M. H. MacLeod, and Dr. F. M. Sandwith.

THE seventh meeting of the Departmental Committee appointed by the Lord President of the Council to consider the working of the Midwives Act was held at the Privy Council Office on March 17th. The following witnesses attended and gave evidence: Dr. E. W. Hope, Medical Officer of Health, Liverpool; Mr. G. H. Fosbroke, Medical Officer of Health, Worcestershire; Mr. J. R. Kaye, Medical Officer of Health, West Riding, Yorkshire.

THE sixth National Periodical (French) Congress of Gynaecology and Obstetrics and Paediatrics will be held at Toulouse from September 22nd to 27th, 1910, under the presidency of Professor Kirmisson, who will also preside over the Section of Paediatrics. Professor Hartmann will be president of the Section of Gynaecology, and Professor Rouvier, of Algiers, of that of Obstetrics. The General Secretary of the Congress is Dr. Audebert, Professor of Clinical Obstetrics at Toulouse.

THE German Congress of Internal Medicine will hold its twenty-sixth annual meeting this year at Wiesbaden from April 19th to the 22nd. Among the communications promised are the following: Dr. Magnus-Levy, the metabolism of mineral material in clinical pathology; Dr. Head, sensibility and the testing of sensibility; the same subject will be dealt with by Professor Schoenborn, of Heidelberg; Dr. E. Müller, of Breslau, antiferment of the

tryptic pancreatic and leucocytic ferment; and Dr. Plömes, of Dresden, on the relation between disturbances and diseases of the circulatory apparatus, with special reference to nervous disorders of the heart.

ON January 1st, 1909, the number of medical practitioners in Norway was found to be 1,231, of which number no less than 38 are women. This is probably the largest percentage (3 per cent.) of medical women in any country. As the whole of Norway has only about 2½ million inhabitants, and the two largest towns, Christiania and Bergen respectively, about 230,000 and 70,000 only, it is difficult to see how so many medical women can find a living.

THE school of massage attached to the National Hospital for the Paralysed and Epileptic, Bloomsbury, has proved so successful that it has now been decided to extend the teaching to male pupils. Hitherto only the male nurses of the institution have been taught, but, commencing with Easter Term, outside men students will be allowed to join the classes. The lectures on theory will continue to be in the hands of Mrs. Hawkins, and Mr. J. Richert has been appointed to give practical demonstrations to the men's class. The qualification for membership of the National Hospital Male Nurses' Association will still be confined to those who have obtained the hospital certificate, and the public can therefore, through the association, obtain nurses who are also masseurs.

THE annual meeting of the General Council of King Edward's Hospital Fund for London took place at Marlborough House on March 10th, the Prince of Wales being in the chair. The proceedings were of a formal character, consisting mainly in the presentation and adoption of the report and accounts for the year 1908. The leading events recorded in the report have all been already noticed in these columns. The total receipts for the year were £345,792 15s., and the total distributed £140,000. It is clear that the financial management of this Fund must be of the most admirable kind, for the total cost of administration up to date has been less than 1¼ per cent. on the sums received, while when the capital invested in non-trust stock was valued last July it was found to be worth £100,000 more than the sum originally paid.

IN our issue of February 27th, attention was drawn to the section of the Minority Report of the Royal Poor Law Commission which dealt with the infant mortality in Poor Law institutions. It was shown that the mortality among infants born in workhouses was extremely high. In the next issue some statistics of the Charité State Hospital in Berlin were quoted, and it was stated that 2,543 children had been born in that hospital in the year 1906–7. We have since ascertained that the number of infants who died in the Charité Hospital during the year under consideration was 152, and that there were 184 stillbirths. The ages of the infants dying in the Charité cannot be stated, so that the figures are not directly comparable with those for the English workhouses, but they certainly appear to indicate that the Berlin mortality is much lower. We are glad to observe that Mr. Burns stated that the statistics quoted in the Minority Report of the Royal Commission are being carefully examined by the Local Government Board.

THE 136th anniversary dinner of the Medical Society of London was held at the Hôtel Métropole on March 10th, with Mr. C. B. Lockwood, the President, in the chair. Covers were laid for over 150 guests, and the arrangements for the comfort of all concerned were admirably carried out by Mr. Bethell, the Librarian of the Society, under the direction of the Honorary Secretaries, Mr. T. H. Kellock and Dr. Leonard Guthrie. The Chairman, in proposing the toast of "The Medical Society of London," said that, though the society possessed admirable premises in Chandos Street, there was not quite sufficient room for its requirements; but the time was not far off when that defect could be remedied. In addition to its library, the society possessed valuable pictures and property. The financial position was so sound that, if it were necessary at once to liquidate, it could pay all its creditors at least eight times over. The toast of "The Guests and Kindred Societies" was proposed by Mr. J. Langton and replied to by Sir William S. Church and by Sir Alfred Keogh, Director-General A.M.S. Dr. J. K. Fowler submitted the toast of the Chairman, who, in concluding his reply, gave the toast of the Honorary Secretaries. After these gentlemen had replied, the company separated.

TWO fasciculi of the *Bulletin de la Société Médicale de l'Ile Maurice* which have reached our hands contain an account of the proceedings of the principal medical society in this French-speaking British dependency during the latter half of the twenty-sixth year of its existence, ending December, 1908. Among the twenty or more papers contained are several of interest, and more particularly two dealing with the method of treating abscesses, originally described by Dr. Phillips, of Bradford, in the BRITISH MEDICAL JOURNAL on May 16th, 1908. The author of the longer of the two papers, Dr. F. Rouget, considers this treatment constitutes a great advance in surgery, and suggests that it be known as "tight packing." The second paper is equally favourable to it. Dr. Felix records some cases of persistent hiccough in old people successfully treated by subcutaneous injections of quinine, and suggests that in them malarial infection may betray itself merely by a very slight rise in temperature and gastric troubles accompanied by persistent hiccough. Also contained in the two volumes are some four or five papers dealing with the pathology and treatment of malarial fever accompanied by haemoglobinuria, the so-called blackwater fever.

THE second International Congress on Industrial Accidents will be held at Rome from May 23rd to 27th. The official programme of discussions includes the following subjects: (1) The organization of a medical and surgical service for the treatment and observation of the consequences of industrial accidents. (2) The organization of a medico-legal service to deal with industrial accidents and to establish rules for the guidance of doctors who have to examine such cases. (3) Determination and prognosis of the neurotic element in industrial accidents. Under this head is placed the estimation of working capacity before and after the accident. This includes: (*a*) Methods of examination for that purpose; (*b*) the importance of the condition before the accident (predisposition, previous illnesses, etc.); (*c*) anthropological and sociological data (race, age, sex, criminality, etc.); (*d*) the influence of circumstances connected with the accident (legal process, medical examinations, etc.), the influence of forms of compensation on the development of post-traumatic nervous affections. (6) Statistical data from the medical point of view as to the consequences of the application of the compensation law. (7) Functional adaptation of injured joints. Communications relative to the congress should be addressed to the General Secretary, via Borgognona 38, Rome. Papers, which may be written in Italian, French, German, or English, should be in the hands of the general secretary on or before April 1st. Reports introductory to discussions should not exceed sixteen and papers should not exceed eight printed pages in length. In each case they should be accompanied by a summary of not more than thirty lines in length.

ON several occasions during the last few years allusion has been made in these columns to the lack of proper provision in the mortuaries of the metropolis for the preservation of bodies awaiting identification and *post-mortem* examination, and we showed as recently as last January that there was a strong case for the immediate filling of this gap in medico-legal machinery. It is with satisfaction, therefore, that we note that the Corporation of the City of London, whose coroner, Dr. Waldo, has been particularly active in urging this reform, has provided a Rechter apparatus, an appliance which works with formaldehyde gas, and affords, in the opinion of many pathologists, a better means of preserving bodies than a freezing machine. When drawing the attention of the jury to this new provision at an inquest on March 12th, Dr. Waldo mentioned that the net outcome of sundry recommendations on the subject which he had forwarded to the London County Council from juries in the other district of which he is coroner, namely, Southwark, was a letter stating that the Council did not at present see its way to provide any means of preserving bodies. It is a somewhat curious result, for the desire for an appliance to preserve bodies in a condition in which they may be identified or examined is no mere medical or legal fad. The value of refrigerators in connexion with public mortuaries has been recognized by the legislature, for a section intended to secure the provision of such aids to criminal investigation was introduced into the Public Health Act (London) of 1891. The cost of appliances which fulfil the purpose in question is not great, and as compared with their practical value is a mere trifle. It is to be hoped, therefore, that the London County Council will reconsider the question. In these days any important municipal authority which neglects to make at one or more of its mortuaries such a simple provision as a refrigerator or equivalent apparatus is guilty of an anachronism.

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RIGHT THINKING.

IN one of Goethe's conversations with Eckermann the importance of right thinking was discussed, and the great poet-naturalist somewhat startled his interlocutor by exclaiming, "The worst of it is, it is "so hard to think!" This is the common experience of pious persons who practise what is called "meditation"; they too often find, when they try to fix the mind on a given subject, that there seems to be a disturbing influence within the brain which makes the thought wander from the point proposed as its aim. Few, indeed, are those who, like Socrates, can stand forgetful of outward things, absorbed in the pursuit of a train of thought for many hours. Some men think quickly, while the mind of others works slowly. But it is certain that unless one can, in Newton's phrase, "intend" the whole power of the mind to the solution of a problem, the result will be confusion and error. Nothing has more retarded the progress of medical science than loose thinking. Even in men of wide reputation, we have often been struck by the looseness of thought, the carelessness in detail, and the apparent inability to appreciate the nature of proof displayed in matters of ordinary business. This inaccuracy of mind manifested in a sphere where its effects are plainly visible inevitably suggests some doubt as to the soundness of work for the correct estimation of which special knowledge is required. It must, we think, be confessed that medical research suffers from the lack of a proper discipline in the use of the reasoning power in many of those by whom it is pursued. Hence the readiness to assume what has to be proved, the wrong interpretation of facts, and the misuse of statistics which lead to erroneous generalizations and the erection of hypotheses on foundations too flimsy to support them, or even purely imaginary. The "wish "to believe" is sometimes as strong a factor in "scientific" investigation as it is in the field of theology.

The history of medicine is to a large extent a record of doctrines crumbling away at the touch of new truth, and of facts laboriously piled up into formulas and pulled down by later knowledge, like the blocks in a child's toy. Many of the greatest advances in medicine have been due to accident, and a harvest has been reaped from seed which the sower thought worthless, or intended for a different purpose. This is why it is so undesirable that research should be tied down to the search for results of immediate practical usefulness.

The study of medical science is in itself of extreme difficulty for the reasons embodied by Hippocrates in his famous aphorism. The uncertainty and elusiveness of the facts makes mistiness of thought concerning them inevitable. All the more, therefore, should we strive to attain at the correct thinking which is our only sure protection from the *ignes fatui* of fallacy that are everywhere about us luring us into the quagmire of error. In his Address in Medicine delivered at Exeter in 1907, Dr. Hale White dwelt strongly on the all-importance of accuracy of thought in medicine More recently, at a meeting of the Medico-Legal Society, Mr. Justice Walton delivered an address entitled "A Plea for Correct Thinking." Naturally the judge dealt with the subject from a somewhat different standpoint than that of the physician, but this makes his deliverance all the more valuable. Among other things he said that not long before, during a discussion upon the subjects to be included in a course of studies, when it was suggested that logic should be one of them, he heard a very eminent person ask why young people should be taught an elaborate process for doing that which every man endowed with the use of reason does for himself without thinking. In regard to this point, Mr. Justice Walton asks if the habit of correct thought is so universal as is implied by such a question, "Are we "always quite sure that our instructors mean exactly "what they say, or know exactly what they mean?" He went on to say that of the work that has been done in the past, and still more of the work that is being done at the present time by the observers of Nature, as it discloses itself to them in the heavens above and the earth below, of their patience, their accuracy, their skill, their insight, he could only speak with the humblest respect and admiration. "It 'is only," he significantly added, "if and when the "student of Nature, of the things which can be "observed, ventures beyond the ultimate limits of the "observation and analysis of facts into inferences as "to that which cannot be dissected and cannot be "analysed and cannot be seen, weighed, or felt, that "the lawyer-like instinct begins to prompt inquiries "which in certain quarters are not unlikely to be "resented as pedantic and out of date." He urged that he was to some extent justified in suggesting that the lawyer's experience in the practice of his profession afforded a discipline which might be very valuable in dealing with the larger issues involved in the regulation of human society and in the administration of the affairs of the State. We may add that, in our opinion, such training has a very decided value in making the careful sifting of facts and the weighing of evidence for and against a scientific generalization an automatic part of the intellectual process. The lawyer's special point of view arises from the habit, said Mr. Justice Walton, in the first place, of distinguishing facts from theory, of ascertaining facts exactly, and, by a careful examination of the best evidence, of considering the relation between the facts so ascertained and the theory or general rule.

All this is still more necessary in the search for truth in a sphere where the issues are more complicated, the facts more doubtful, and the evidence more difficult to appreciate than is the case in the matters dealt with in a law court. For this reason we have always opposed any narrowing of the preparatory training which should be required of those who wish to enter the medical profession. We need not put over the portals that give admission to it the intimation placed over the door of his school by the old philosopher, that no one but geometricians should enter. But we should insist less on a knowledge of facts such as was considered essential by Mr. Gradgrind, and more on proof of the possession of the power to reason upon facts. Logic is simply the analysis of the manner in which the mind travels towards right conclusions, as grammar is the analysis of speech; it cannot teach a man to reason, but it may show him how to avoid error, as grammar may save him from solecism. Even the despised scholastics might give men who think of scientific research, as

Dogberry did of reading and writing, that it comes by Nature, some useful hints in regard to clearness of definition of terms, accurate statement of the question and rigour of inference from premisses. All these things are too often unfortunately wanting in medical discussions and essays.

UNEMPLOYMENT.

THE subject of unemployment has been so prominently before the public during the last few years, and has come to assume so largely a political rather than an economic aspect, that the essay on unemployment[1] published recently by Mr. Beveridge is a refreshing return to the cooler atmosphere of facts and figures. One conclusion to be drawn from it is that unemployment has been greatly exaggerated and that it does not necessarily mean bad trade, nor could it under existing conditions be removed by making trade better. Further, most of the remedies which take the form of supplying additional employment of a temporary kind have failed to effect their object, and are not likely to succeed, as they do not touch the causes of the condition they seek to remedy, or even assist the class of men for whose benefit they were designed. The figures furnished by the Board of Trade week by week to show the percentage of unemployment are obtained from the books of a small number of trades unions which are in the habit of paying subsistence money to their members when out of work, and are therefore in a position to supply these statistics, but they represent only a small proportion of trades unions, and a still smaller proportion of the total number of labourers.

Mr. Beveridge thinks that the average of 5 per cent. is too high as an estimate of total unemployment, although the fluctuations of the figures from year to year give some idea of the general state of trade. It is somewhat remarkable that unemployment as shown by the trades unions' figures is present during the years when trade is at its best—that is, there is always a fringe of unemployment which must be attributed to personal causes, the less efficient or less industrious workmen most easily losing their employment. Investigation of the books of the trades unions shows that the same men come on the fund year after year. The most important cause of unemployment is the large amount of casual unorganized labour, which leads to the existence of an unnecessarily large reserve of workmen. Where men are employed from day to day every man thinks he has a chance of a job, and consequently an unduly large number of men apply.

Much benefit resulted from the better organization of labour after the great London dock strike, so that whereas before 1891–2 75 per cent. of the dock labourers were casually employed, the latest figures show that 80 per cent. are on the permanent staff, and only 20 per cent. casual. But in a great many trades, especially where there are numerous small employers, as in the building trade, there is a vast number of casual labourers, probably twice as many as can be regularly employed, who are consequently as a class working half-time, never earn full wages, and are always ready to drop into a state of destitution when trade gets slack or other unfavourable conditions arise. Mr. Beveridge's remedy is the creation of State or Municipal Labour Exchanges, worked with the co-operation of employers, who should be willing to diminish the total number of men employed in their business as casual labourers. The effect of this would be to give certain men more steady employment, but it would diminish the number of men employed, and for the men thus thrown out work would have to be found elsewhere. It is contended that if the change were made at a time of good trade this would not create a serious difficulty.

It is reassuring to be told that investigation of the books of trades unions does not indicate that recent legislation has led to any reduction of the age to which workmen are able to continue their employment; the superannuation tables, in fact, show that the age of retirement is rising. It is not proved that the unemployed comprise a larger proportion of the unskilled workers than of the skilled, but probably they do, since the latter may sink from their position to that of the unskilled, from loss of character or other causes. There is a legitimate demand for unskilled labour, and, although the number of persons who are now seeking such work may be too large, it is not certain that the number of really efficient so-called unskilled labourers who must possess certain aptitudes to be of use is greatly in excess of the demand. At the same time, efforts should be made to direct boys and girls into channels which will lead up to skilled occupations rather than to those "blind alleys" which lead nowhere, and leave those who have followed them when they reach adult life stranded and compelled to join the army of unskilled workers. We may note here that this has in the past been the case with the army, and that it is a reproach which it is within the power of the military authorities to remove or diminish; but the accession of time-expired men is probably one reason why the tables show that the number of the unskilled rises greatly between the ages of 30 and 40.

While the existence of unemployables must be admitted, their numbers may easily be exaggerated, and Mr. Beveridge's remedy is "to abolish the social "conditions which pander to idleness and irresponsi-"bility." With regard to recent legislation in favour of the unemployed, the Act which is generally associated with the name of Mr. Long was designed to assist men temporarily out of work owing to dislocation of trade; its underlying idea was to supply them with a bridge which would carry them over the gulf lying between one period of good trade and another. The experience of the Distress Committees in London and the provinces shows the rarity of such persons among those who apply for help, and the impossibility of limiting assistance as directed by the Act to persons who are not in a chronic condition of destitution. Further, it has been found that relief work is not educational; it does not stimulate the industrial habit, the same men being found year after year applying to the committees for help. The relief works have failed to fulfil the laudable object of restoring those employed on them to the ranks of normal industry. Mr. Beveridge believes that such works are altogether in the wrong direction, and that no alteration in the mode of carrying them on can remove these essential defects; they generally imply, he thinks, something that is degrading to the name of work, and disregard the principles of relief.

In addition to recommending the establishment of proper Labour Exchanges and the decasualization of unskilled labour, Mr. Beveridge points to what is done by trades unions themselves to solve the problem of unemployment within their own organizations as showing that the principle of insurance can be suc-

[1] *Unemployment: A Problem of Industry.* By W. H. Beveridge, Stowell Civil Law Fellow, University College, Oxford. London: Longmans, Green and Co. 1909.

cessfully applied. This is admitted by the Imperial Statistical Bureau in Germany, which has considered the question, but the real difficulty is to determine the test of unemployment which should entitle the men to benefit. The value of the test used by the trades unions depends very much upon the local knowledge of the branches with regard to individuals, and, in the opinion of Mr. Beveridge, the practicability of insurance hinges wholly upon whether Labour Exchanges can be worked so as to embrace the whole of the working population concerned. He gives an interesting account of what has been done in Germany towards the perfecting of the system of Labour Exchanges. Much may be learnt by a study of German experience, as different methods have been followed in different parts of the country, and it is very striking that, whereas when they were started ten years ago, trades unionists were hostile, they are now almost entirely in their favour, and the extent to which they are being used, both by employers and employed, is growing rapidly every year.

The second part of the Minority Report of the Royal Commission on the Poor Laws[1] is mainly devoted to the discussion of the organization of the labour market, and its conclusions, though expressed in more flowery language, are not dissimilar from those at which Mr. Beveridge arrives. Both regard the unorganized state of the labour market as the principal matter to which the attention of reformers should be directed, and both urge the decasualization of labour and the organization of proper Labour Exchanges. In the historical account given in the Minority Report to the efforts of the Poor Law authorities to deal with unemployment the view is taken that in 1834 the Commissioners had their attention chiefly directed to unemployment in agricultural districts, and that their recommendations were directed to cure the evils then existing amongst farm labourers. The measures taken were successful, though to what extent they drove the excess of labour from the country to towns cannot be determined, but when it was attempted to apply the same methods to the unemployed class in the towns their inadequacy was at once apparent. From that time to the present local authorities have been complaining to the Local Government Board of their inability to deal with the numbers of destitute but able-bodied persons applying for relief without violating the Board's rules. Test houses, stone-yards, and the like, and, in a few places, special workhouses for their detention, have been tried without any real success.

One of the main recommendations of the Poor Law Commissioners in 1834, which was that the different types of persons requiring relief should be classified and cared for in separate institutions, has not been generally carried out. The Royal Commissioners are unanimous in recognizing this and in advising that classification is essential. It is comparatively easy to suggest means of dealing with the sick, the infirm, the aged, and the defective; it is more difficult to devise an effectual method of dealing with the unemployed and the unemployable. The Minority Report, as we have already stated, recommends the constitution of a Ministry of Labour, to have charge of labour exchanges, industrial insurance, the maintenance and training of the inefficient, industrial regulation, emigration, and statistics. It appeals to the success that has attended the institution of the Mercantile Marine Offices for Seamen in support of the proposal of compulsory Labour Exchanges for casual labour. It suggests compulsory registration for men found houseless and requiring public assistance, and that inefficient workmen who are unable from want of training to earn their own living should be afforded residence and maintenance on condition that they submit to the necessary physical and mental training, and that penal colonies with power of detention and discipline should be organized for those who will not work. Public works at the public expense are approved provided they are so arranged as to afford additional employment in times when trade is slack; and it is maintained that, by spreading a programme of work over ten years, and borrowing money if necessary to carry out work during bad times, much might be done to diminish the effect of the fluctuations in trade. Such work, it is advised, should not be done by the "unemployed," but by contractors employing men in the ordinary way, who will do a fair day's work for a fair day's pay, and be dismissed if not efficient.

Most people will approve of the recommendations that all young persons should be compelled to attend trade schools and that the half-timer system should be abolished; and many will agree that all destitute mothers of families should have adequate relief—that is to say, complete support—on the understanding that they do no work except looking after their children. As we have previously pointed out, the differences between the majority and the minority do not justify the publication of separate reports. So much is admittedly desirable and is so urgent to be done upon which majority and minority agree that it is to be hoped these minor divergencies will not stand in the way of necessary reform. The reform should not be made a party question. Mr. Chamberlain, Mr. Walter Long, and Mr. Gerald Balfour have in the past shown their desire to grapple with the great and serious difficulties which have grown up in our great towns, and if Mr. John Burns will introduce a bill to found an adequate system of Labour Exchanges, we trust that its principle will be supported by the leaders of both parties in Parliament.

[1] Report of the Royal Commission on the Poor Laws and Relief of Distress. To be purchased, either directly or through any bookseller, from Wyman and Sons, London; Oliver and Boyd, Edinburgh; and E. Ponsonby, Dublin. [Cd. 4499.] Price 5s. 6d. The second part of the Minority Report has been published, under the title, *The Public Organization of the Labour Market*, edited, with an introduction, by Sidney and Beatrice Webb, by Messrs. Longmans, Green, and Co., in an octavo volume of 360 pages, price 5s.

A MEDICAL TOUR.

MAJOR-GENERAL VESEY DAWSON, C.V.O., arranged a tour for the medical officers of the Second London Division Territorial Force extending over the last week-end. All the medical officers in the Division were invited to attend, and seventeen availed themselves of the opportunity of instruction afforded; twenty-five had signified their intention of being present, but owing to the large amount of illness now prevalent, eight had to withdraw. This difficulty is always apt to arise with medical men, and the administrative medical officer had fixed on this season because in ordinary years it is as good a time as any for a man to leave his practice for a couple of days. Among those actually present there were the administrative medical officer, Colonel Andrew Clark, V.D., as well as representatives of general hospitals, field ambulances, battalions, and the sanitary service, and the instruction was so arranged that each was employed in appropriate duty. The military aspect of the tour was directed by Colonel Maude, C.M.G., the general staff officer, and in order to

make the work as instructive as possible from a medical point of view, he had the assistance of Colonel Magill, C.B., staff officer to the A.M.O. On arriving at St. Albans at about 5 o'clock on the afternoon of March 12th, Colonel Maude explained the military situation and the scheme of operations which had previously been circulated. The next morning each medical officer proceeded to the point where he would be required, and, having thoroughly mastered the situation, wrote a report; these reports were handed in, and examined and criticized by the directing staff, and subsequently returned to the officers concerned. The next day the various situations were visited by the entire party and the military and medical conditions discussed on the spot. During the stay at St. Albans lectures were given by members of the directing staff on the medical service in the field in time of war, on the sanitary aspects of the present operations, and on the adaptability of buildings for medical services. Those who took part in the tour were unanimous in expressing their sense of the benefit they had derived and the practical knowledge they had gained; it is only to be regretted that more were not able to take advantage of the opportunity for instruction. At a staff ride of the officers of the Second London Division last November four medical officers were present, and five medical officers intend to take part in another staff ride of the division to be held next week.

INCOMPATIBLES AMONG ANTIBODIES.

THE members of the Antivaccination League who attended the annual meeting recently held in London in diminished numbers must have dispersed, perhaps in a wiser, but certainly in a sadder mood. They were prepared for a depressing time by the particulars circulated in the annual report of declining interest and exhausted funds. To arouse the League from the condition of anergic stupor into which it had lapsed one of the most voluble leaders of the movement had prepared a wonderful serum with which he experimented on the assembly. He urged the extension of the objects so as to include "the legal prohibition of vaccination and of the "intentional introduction of any diseased product "into any living animal, either for prophylactic or "curative or experimental or any other purposes." This was the panacea for the evils and troubles which confronted the League; but it did not act successfully. So far from acting as a remedy, the most strenuous opposition was aroused, and most of the speakers strongly protested against the scheme, which was wisely withdrawn. For some years, as we have pointed out in these columns, dissensions among antivaccinators have constituted a leading feature at these annual meetings, and on the recent occasion these were more pronounced than ever before. The *Vaccination Inquirer* for March refers to the "brisk discussion" on the paper, and mildly states that "this year's "annual meetings will no doubt have produced some-"what mixed impressions on the minds of those who "were present." Reference is also made to the "lull in the movement." A long letter of castigation, addressed to the League from one of the pillars of the cause, appears in the official organ. He regrets the decadent tendencies which he observes in the League, and which he avers, if not stopped, will work its utter downfall. One of these is "the attempt to procure "prohibition of vaccination." Of this proposal he writes: "Our Advisory Committee will be appointed "to the command of the home fleet long before there "looms upon the horizon of practical politics any "shadow of a shade of the possibility of the enact-"ment of such a law. . . . The thing is a nightmare; "it shall never be realized, save after and against "all that one man, at least, may do to stay so "base a wrong." This declaration and determined attitude of Mr. Alfred Milnes, whose name is so well known to the antivaccinators, when read at the annual meeting, must have staggered those who heard it; we cannot believe it merely produced somewhat mixed impressions. No less forceful was the opposition hurled at the other "decadent tendency" by which it was proposed to kill two birds with one stone. The scheme to join issue and work hand in hand with antivivisection societies was resented and condemned. Altogether Mr. Swan, who contributed the paper, appears to have had a trouncing which must have made him wonder if by any chance he had wandered into the enemy's camp instead of being among his own friends. More interesting, though more depressing to the League, were certain statements made by Members of Parliament who were present. Mr. R. C. Lehman, M.P., is reported in the *Inquirer* to have been "rather de-"spondent about further legislation just at present." Mr. Arnold Lupton, M.P., "thought it was a drawback "to their movement that there were now fewer im-"prisonments. He felt the most sincere contempt for "the new Act. As far as the present House was con-"cerned he thought the best line was the anticom-"pulsion line. He had little difficulty in getting "many members to agree with him as to that, but "when it came to the case of vaccination itself it was "another matter." This candid confession of the failure of his efforts in season and out of season is refreshing and supports the contention of the pro-vaccinists that despite the machinations of the anti-vaccinators no advance has been made in the attack on vaccination *per se*.

BOXING A CHILD'S EARS.

AT the Leeds County Court on March 12th an infant claimed through her father £9 6s. for personal injuries sustained through the defendant, a certificated school teacher, having boxed the ears of the child. It appeared, according to the report in the *Times*, that an abscess was caused, and the girl, who gave evidence, was still being treated for deafness. It was elicited that the plaintiff's head struck the back of the seat when her ears were boxed. The doctor who had examined the child attributed the injury to the ear to a blow. The judge referred to a case in which it had been decided that a certificated teacher had a right to do that which a parent had a right to do. He therefore found for the defendant. Taking the report as it stands, we venture to submit, with all respect to the judge's decision, that boxing a child's ears is a stupid way of inflicting punishment; the child is taken unawares, and is afforded no opportunity of pleading for a mitigation of the punishment, which may be a life-long sentence. Granting that a certificated teacher has a right to do that which a parent has a right to do, then if the law permits a parent wilfully to do what is commonly acknowledged to be detrimental to his child's health the time is ripe for the amendment of the law in the interests of the offspring and of the country. We are glad to be in a position to state that the London County Council does not allow the boxing of the ears of children placed under its care in the elementary schools. We believe that in these schools when corporal punishment is called for under no circumstances is it permitted to strike the head. It is important to note that under this regulation the teacher's power of control has by no means been diminished. On the

contrary, we understand that the number of cases requiring punishment of a corporal nature has enormously diminished in the London County Council schools within recent time. It is probably no exaggeration to estimate the diminution in the number of these cases as 90 per cent. This happy result is explained by the power of inflicting punishment being placed in the hands of all teachers. Every case in which punishment is inflicted has to be recorded in a book. Formerly only the head master or the head mistress of a school was allowed to inflict punishment, with the result that a troublesome child, knowing full well that the teacher dared not hit her, when corrected would put out her tongue and make grimaces; and the teacher, on her part, also knew full well that if she were continuously sending up cases to the head teacher for punishment, the head teacher, not having witnessed the transgression, was apt to come to the conclusion, and to tell the teacher, that if she were not able to control the children without punishment then she was not competent for her post. Under the present system a child, knowing that the teacher can hit her on the hand, has no option but to abstain from making grimaces when corrected. On the part of the teacher who has not the right to inflict punishment it is only fair to state that the conduct of the children under her care must at times be most exasperating, but wilfully to box a small child's ears seems to be an admission of a want of control of temper on the part of the teacher.

LONDON SCHOOL OF TROPICAL MEDICINE.

SIR FRANCIS LOVELL, C.M.G., Dean of the London School of Tropical Medicine, is making a tour through some parts of the tropics. As Hannibal went about endeavouring to stir up enemies against Rome, so Sir Francis Lovell, with rare devotion, is giving time which he might well spend in the enjoyment of well-earned rest to the attempt to enlist aid for the campaign against the invisible enemies of one kind or another which are the causes of tropical diseases. We are glad to learn from the *Ceylon Independent* that he has been cordially welcomed by the members of the British Medical Association there. On February 16th a dinner was given in his honour at Colombo. Dr. H. George Thomasz, President of the Branch, was in the chair, and among those present were Sir Allan Perry, P.C.M.O., Dr. Aldo Castellani, Dr. M. Sinnetamby, Professor Browning, and many others. Dr. S. C. Paul, who was in charge of the arrangements, acted as croupier. Dr. Thomasz proposed the health of Sir Francis Lovell, who, in responding, said the London School of Tropical Medicine was now entering on its tenth year of existence. From relatively small beginnings, its work had been gradually expanded, so that at the present time the school had an annual entry of from 90 to 100 students, and a staff of five salaried teachers, whose entire time was devoted to teaching and investigation, and of ten lecturers, each of whom delivered a course of lectures on his special subject three times a year. The large number of post-graduate students (816) who had passed through the school, and the fact that year by year the length of the average attendance of the individual student had steadily increased, indicated that the school met a want. In addition to teaching, the school had endeavoured to prosecute and encourage research in tropical medicine. With this end in view, through the assistance of the Government, special chairs had been established in helminthology, in protozoology, and in anthropology. Moreover, the staff of the school was prepared to continue to give help to workers on tropical subjects who could not take furlough to England. A museum illustrative of tropical pathology and hygiene was gradually being formed, and one important branch of it was the collection of blood-sucking insects and other animals concerned in the transmission of disease. The collections were being arranged in such a manner that a student, about to proceed to the tropics, could see at a glance and easily study from actual specimens not only the disease germs, but the disease transmitters of the particular colony or protectorate in which he proposed to work. In addition to teaching and investigation carried on in London, the school from time to time had sent Commissioners to various places in the tropics to study special diseases. These expeditions had added materially to knowledge, and it was to be regretted that, from lack of funds, they had not been more numerous. Sir Francis Lovell went on to say that the principal object of his mission was not merely to raise funds for the school, but to bring before the residents in the tropics the advantages which they were likely to derive from the research work which had been done and which was likely to be done by the London School of Tropical Medicine. He was glad to say that since his arrival in Ceylon the Governor had very kindly consented to grant the school an annual subsidy of £100 a year for five years, subject, of course, to the sanction and approval of the Legislative Council and of the Secretary of State. This was the same course which had been followed in the case of the other contributing colonies. In addition to the subsidy from Ceylon he had been able to enlist the sympathies of the members of the Chamber of Commerce; an appeal would be issued on behalf of the school for support, and he had every reason to believe that the appeal would be favourably entertained. In addition to this, the matter had been brought before the Committee of the Planters' Association at Kandy and he had every reason to believe that the members of that association would also give a favourable response.

DISINFECTION BY STEAM.

IN so important a subject as the disinfection of objects in daily use, it is primarily essential that the processes which govern the life and death of pathogenic and non-pathogenic micro-organisms should be minutely studied and understood. When every fact concerning the tenacity of life of micro-organisms is thoroughly mastered, the germs will no longer be a menace to mankind. In the meantime we must content ourselves with discovering the laws which underlie these processes generally and giving practical application to this knowledge. Disinfection can be carried out in many ways, but for practical purposes the methods available are restricted to certain chemical substances, certain biological products, and heat. In practice heat can be applied only under certain restricted conditions. Professor S. Delépine has recently published[1] a very clear account of the conditions governing the use of steam both at low and high pressures. He points out that the following conditions must necessarily influence the resistance offered by the organisms: (1) The presence or absence of spores; (2) the amount of moisture; (3) the nature and amount of associated material, such as blood, etc.; (4) the nature and amount of material intervening between the bacteria and the source of heat; and (5) the temperature. Having disposed of these matters briefly, Professor Delépine describes the essentials of practical steam disinfection. He deals only with disinfectors working with current steam, and leaves it to the reader to adapt what is said to apply to confined steam disinfectors. The time required to heat and fill the disinfector with dry, saturated steam

[1] *Medical Chronicle*, December, 1908.

varies, of course, with the construction of the disinfector; but he states that an apparatus of usual size would take at least thirty minutes, and that from ten to fifteen minutes should be allowed for the steam free from air to penetrate through 8 to 10 in. of mattress or blanket, so that in practice about three-quarters of an hour, therefore, must elapse before the bacteria at the centre of the material being disinfected are acted upon by the steam. Professor Delépine next considers the actual killing off of the bacteria, and taking as a standard a bacterium of a resistance not exceeding that of the spores of *Bacillus anthracis*, he finds that at ordinary atmospheric pressure, current steam kills within five to fifteen minutes. If it is required to kill the resistant spores of earth bacilli, at least two and a half hours' exposure should be allowed. He gives a table showing the time required for the three stages under certain conditions, and concludes that ordinary disinfection would occupy a period of from three-quarters of an hour to two hours, while sterilization would require from three to over nine hours. With steam under a pressure of 10 lb., that is, at 115° C., the reduction in time is only a few minutes. Under 20 lb. pressure, complete sterilization can be completed in from 45 to 130 minutes. Thin materials can be rapidly dried after exposure to dry steam above 100° C. by removing to a dry shed while still hot; but with steam at 100° C. drying is more difficult. In summing up the advantages of high compared with low pressure disinfectors, Professor Delépine relies chiefly on the time factor and the ease in drying. The cost of the low pressure apparatus is usually, although not necessarily, less than that of the high, and the same may be said of the weight. Low pressure disinfectors are frequently more simple and worked more easily.

THE CLAIMS OF DENTISTRY.

MR. MORTON SMALE, Consulting Surgeon to the Royal Dental Hospital in Leicester Square, made some good points in his address from the chair last week at the annual general meeting of governors. Speaking of the efforts of the staff to spare their patients all superfluous pain, he showed that nitrous oxide has been administered at the institution over half a million times without a single fatality. As for the excellent dental school which is carried on in connexion with this hospital, he indicated that whatever might be the case at hospitals of an ordinary type, dental work on a large scale could not possibly be carried on without the assistance of students. In its indebtedness to the student the Royal Dental Hospital does not really stand alone, for, as we have shown on sundry previous occasions, the presence and co-operation of students must necessarily be of immense importance in medical institutions of every kind. It may be conceded, however, that in any great dental institution students are not merely an advantage, but an essential. Hence the point is one which may fairly be made and wisely emphasized at a time when, under the influence of one or two verbose cranks, there is a certain tendency among the less well-informed section of the public to resent the utilization of hospital wards for teaching purposes. Mr. Smale also stated that at the Royal Dental Hospital 20 per cent. of all fees received from students is made over to the general funds of the institution. Unfortunately, however, these fees are but a drop in the ocean compared with the financial needs of the institution, which is seriously embarrassed by the necessity of early liquidating the heavy expenditure involved by the erection of its present buildings. As some £43,000 still remain to be paid, such a degree of economy has to be exercised in the working of the institution that full advantage cannot be taken of many of those modern contrivances and arrangements by which efficient work is elsewhere facilitated. In spite of this fact, the work done is as excellent as its volume is great. That its value is amply recognized by the three great Metropolitan Hospital Funds, which make it their business to ascertain the precise merits of every institution seeking their aid, is not enough. It should be equally recognized by the general public, more especially at the present time, when the exceedingly important part which may be played by dentistry, in improving the health of individuals and in conserving the physical efficiency of the nation, has at length been realized.

DEATH BY LIGHTNING.

DR. D. CAMPBELL WATT, of Pietermaritzburg (in a letter published in the *Transvaal Medical Journal* for December, 1908), discusses the conclusions and generalizations advanced in a paper on Death by Lightning Stroke, read by Dr. Spencer, of Middelburg, before the Special Subject Section of the Medical Congress at Pretoria. Dr. Watt is qualified to deal with the subject by considerable practical experience, for electrical storms of terrific violence are common in South Africa, and deaths from lightning are frequent. While acknowledging the value of Dr. Spencer's "able" and "exceedingly suggestive" paper, Dr. Watt combats the view advanced therein to the effect that "lightning only burns the human body "when it meets in its course some metallic object." Dr. Watt cites a case which he saw, where a horse and rider were struck dead by lightning, and where, "although the man was undoubtedly burnt "and singed, there was a total absence of fusing of any "metallic object worn on his body, and of any "apparent connexion between the metallic objects "and the burns." There are other points discussed or referred to in the letter, but we must content ourselves here with giving Dr. Watt's conclusions regarding the injuries and appearances which may be found on the body of a person struck by lightning. He says: "It seems to me that the following propositions may "be advanced: (1) Lightning stroke may cause no "external injury to the body struck, or it may cause "extensive injury, both external and internal—"including fracture of bones and laceration of soft "tissues. (2) Death may follow with no apparent "external injury, as well as often extreme wounding, "and is usually instantaneous. (3) Recovery may "take place, even with injury to the tissues. "(4) Death is generally due to shock, or to de-"struction of vital centres. (5) Rending of clothing "has often the appearance produced by an ex-"plosion from within outwards—that is, the ragged "edges are everted as in a wound of exit; and the "clothing may be stripped from the body and hurled "away a distance. (6) These ragged edges may not be "scorched, even although in proximity to parts of "the body scorched. (7) Singeing of the hair and "burning of the skin may occur quite independently "of the fusing of metals or the clothing, or in con-"junction with fusing of metals and burning of "clothing. (8) The stroke may affect the skin and "clothing alternately in a zigzag course down the "body, or the damage to both may be at the same "spots. (9) A wound may be accompanied by burning "and singeing about its lips, or it may not. (10) The "body struck may or may not be hurled to a dis-"tance, and an appreciable interval may elapse before "it falls. (11) A red arborescent streak may be present "on the body, and, if present, is pathognomonic. "It should not be mistaken for tattooing. (12) Rigor "mortis does occur. (13) The blood does coagulate

"after death. (14) A *post-mortem* examination reveals "a contracted left ventricle, and congested lungs and "brain. (15) Symptoms in the living are: Some "degree of coma or confusion of mind, dilated pupils, "headache, feverishness, tingling, paresis, vomiting, "and other symptoms caused by shock, together with "others dependent upon any local injury. (16) The "amount of damage done, or of symptoms produced, "will depend, among other things, upon (*a*) the "strength of the current coming in contact with the "body; (*b*) the path of the current through or along "the body; (*c*) the susceptibility of the individual "struck to shock." The *post-mortem* appearances in a case of lightning stroke may be of great importance from a medico-legal point of view.

SMALL-POX AND THE BRISTOL GUARDIANS.

AN outbreak of small-pox is reported from Bristol. The facts are set forth in a letter to the *Times* of March 15th by Dr. D. S. Davies, medical officer of health, who says that an introduction took place in December which led to fifteen cases of small-pox The last case was notified on March 1st from the country district outside Bristol. Another introduction took place into a public institution on February 16th; from this case seven persons in the city were infected, all of whom were removed to hospital and are doing well. During the week before the date of this letter only one notification of small-pox was received. A specially-summoned meeting of the guardians was held on March 10th. Dr. Sweeting, one of the medical inspectors of the Local Government Board, attended. He informed the guardians of the facts, which gave rise to anxiety, and suggested that increased facilities should be provided for the encouragement and promotion of vaccination and revaccination. Scant courtesy was accorded to Dr. Sweeting, and his proposals were rejected by a majority of 10. For the increased facilities 16 voted; against, 26 votes were cast. Those who spoke against the proposition appear to have been more concerned about the expense of extra vaccination than about the safety of the community. The proceedings, which lasted nearly three and a half hours, were of a most uproarious character. The rejection of the resolution is said by the local press to have been announced "amidst a scene almost approaching "hilarity." Now that the guardians have refused to put into force the statutory powers in regard to vaccination during epidemics, it is possible that they may be superseded by the Town Council, a course which will reflect little credit on the guardians. The members in the minority spoke sound words of common sense, and notice was given by one of the number to move the recission of the resolution a fortnight hence. It is comforting in the circumstances to learn from Dr. Davies that, so far as the city and port of Bristol is concerned, there is at present no epidemic; but the special precautions as to vaccination and revaccination advised by the Local Government Board, and being actively adopted, are in order to anticipate any extension in the country districts and reintroductions into the city, and to prevent extension from the cases already introduced into Bristol.

INFECTIOUS DISEASES IN LONDON SCHOOLS.

THE Education Committee reported at the meeting of the London County Council on March 16th that during the period from August 24th to December 19th, 1908, 101 schools were under observation for diphtheria, 526 children were tested bacteriologically, of whom 38 were excluded on account of diphtheria or suspicion thereof; one department and three class-rooms were closed; 505 schools were under observation for scarlet fever, and seven class-rooms were closed; and 492 schools were under observation for measles, and two departments and twenty-four class-rooms were closed. Dr. Beaton, in commenting on the report, expressed his regret that the Committee should dismiss a subject of this importance in a report of five lines. In the course of a year over 50,000 children in the schools of London were infected, and over 1,000 deaths occurred. He asked the Chairman of the Committee whether something more could not be done to lessen this mass of preventable suffering. In 1908 the Medical Section of the Education Committee met twice, once in January and once in December. Surely more vigorous measures could be taken. Dr. Beaton urged that stricter attention should be paid to the cleanliness of the schools, and to thorough disinfection when an epidemic occurred. At present London schools were only washed once in three weeks and swept once a week. As to disinfection, an instance came to his knowledge recently where an epidemic of scarlet fever which had been going on intermittently for three months was entirely stopped when the school premises were thoroughly disinfected. But Dr. Beaton's was a voice crying in the wilderness. The subject interested neither party on the Council. The discussion was not continued, and the report was received.

PENSION FOR MOSQUITO BITES.

PENSIONS are given for wounds or disabilities contracted in military service. At the present day bacilli are more destructive to an army than battles, and recent research has shown that the mosquito disables more men than the rifle. It is, therefore, we think, only fair that a nation should express its gratitude in the same way to men in the employment of the State who face danger and contract illness in the course of experiments for the good of their country and of mankind at large. We are glad, therefore, to learn from the *Boston Medical and Surgical Journal* that John R. Kissenger, who, as a soldier in the army in Cuba, submitted in December, 1900, to the bites of yellow fever mosquitos in order to assist in the promotion of a knowledge of the mode of spread of the disease, and has been an invalid for a number of years, is to be rewarded for his devotion. A bill has been introduced in Congress providing for a pension for his relief.

MEDICAL MEN AND LEGACIES FROM PATIENTS

A COMMUNICATION has been received from Major Rawnsley, R.A.M.C., in which he complains that the paragraph published under this heading in our issue of March 6th, page 621, reflects upon him personally as one of the plaintiffs in the action referred to. We did not for one moment intend by this paragraph to make any reflection whatever upon him, nor do we see how it is capable of being so interpreted. We desire, nevertheless, at once to express our sincere regret that Major Rawnsley should have placed such a construction upon it, and we take the earliest opportunity of saying, unreservedly, that there is in fact no foundation whatever for any reflection being cast upon Major Rawnsley, or, indeed, for any imputation of any kind being made against him in connexion with the action in question.

AT the meeting of the Medical Faculty of the University of London to consider the proposal to form a Board of the Faculty, the scheme published in the JOURNAL on March 6th, p. 636, was adopted in principle, and the suggested constitution approved, with the addition of the Representative of the University on the General Medical Council. The meeting was adjourned until March 26th, when the remainder of the scheme and the resolution to give effect to it will be considered.

THE PRINCE OF WALES paid a visit of inspection to University College Hospital on March 12th. His Royal Highness was conducted round the wards by Sir Thomas Barlow, Senior Physician to the hospital. The Prince, who, as is well known, has a special knowledge of hospitals, in which he takes a keen interest, expressed his approval of the arrangements at University College Hospital, and the cheerful and airy appearance of its wards. His Royal Highness afterwards visited the new buildings of the medical school, and the new nurses' institute.

Medical Notes in Parliament.

[FROM OUR LOBBY CORRESPONDENT.]

Imported Meat.—Last week several questions were asked with reference to diseased meat sent from America. Mr. Godfrey Baring asked about diseased livers recently landed to which the official label of inspection was affixed, and which had been reported on by the medical officer of the Port of London. Mr. Burns said he had seen the report, and was aware of the statements contained in it to the effect stated. This particular case was receiving his attention, but he might state that the action reported by the medical officer of health was taken under the Public Health (Foreign Meat) Regulations, which he issued last year for the purpose of preventing danger to the public health from the importation of diseased meat, and which he had every reason to believe would be found effective for the purpose. In answer to another question, Mr. Burns said that the offal referred to in that report bore an official label indicating that the boxes containing it had been inspected and passed in the United States. The matter was receiving his attention; but he might point out that any label attesting official inspection abroad did not exempt meat of the kind referred to from inspection in this country, and that, under the regulations, if it was found to be diseased it must be either exported or destroyed. Mr. Courthope further asked whether in view of the statement that many cases of cancer had arisen in this country owing to this diseased liver, he would prohibit it in the future. Mr. Burns said he did not think there was any justification for the statement with regard to cancer. The regulations passed a year ago gave sufficient power to deal with any unsound meat attempted to be brought into this country, as had been discovered in this particular case. With regard to the importation of frozen carcasses from which the lymphatic glands had been removed to conceal the presence of tuberculosis, Mr. Burns said that practically it was only in the case of pigs that the entire carcass was imported as frozen meat. The new regulations dealt with cases where the carcass of a pig was imported without the head in its natural state of attachment and was without the lymphatic glands about the throat and any other part of the carcass in their natural position. In any such case the medical officer of health and the sanitary authority were required to take such action as would secure that the meat would either be exported or destroyed. The powers conferred by the regulations were, so far as he was aware, duly exercised, and they appeared to be sufficient to meet the object in view. In answer to Mr. Vincent Kennedy last Monday Mr. Burns said that he had no information as to the re-exportation during the years 1906–7–8 of meat alleged to be unsound. The new regulations did not come into operation until January 1st, 1909. Any destruction of foreign meat under them must take place under the supervision of the medical officer of health, and after the importer had failed to comply within twelve hours with a notice from the sanitary authority requiring him to give a written undertaking to export the meat at his own expense or prove before a justice that it was not intended for human consumption. If the importer undertook to export the meat, it rested with the sanitary authority to satisfy themselves that the exportation took place. If within three days after the receipt of the undertaking the meat was not exported, the sanitary authority must cause it to be destroyed. The meat need not necessarily be dispatched to the place from which it was originally sent. It was not required to be marked in any way before it was re-exported. In the majority of cases it was taken to the local dust destructor.

The Milk Question.—Last week, on the motion for the second reading of the London County Council (General Powers) Bill, there was an interesting discussion on the milk clauses. Mr. Courthope moved the rejection of the bill in order to denounce the milk clauses and secure their withdrawal. He finally succeeded in his object by getting a promise of their withdrawal before the bill was read a second time. His main argument was that the eleven clauses dealing with milk gave too drastic powers to London as compared with other local authorities. They gave the London County Council power to interfere in any dairy county. A general enactment was wanted and not a special law. At present over 300 authorities did nothing, and in the interests of public health a general law was required. After the rejection had been seconded, Mr. Guinness defended the clauses as necessary for public health. Referring to infantile mortality, he said that in towns 22 per cent. of it was due to diarrhoeal disorders, while in the country it was only 15 per cent. In children fed from the breast or on specially selected milk this cause of mortality was greatly lessened. He quoted the medical officer of health of Islington to the effect that dung was found in 99 per cent. of the samples taken. The County Council wanted powers to take samples at railway stations so as to discover the farms from which impure milk came. Mr. Burns said the Government could not support the milk clauses of the bill because they only partially remedied the evils. The bill to be introduced shortly by the Government would do more and would give larger powers generally over the whole kingdom. He admitted the magnitude of the evils and appealed to the House not to deal with it piecemeal, but to leave out these clauses as the Milk Bill must be passed. He said the Commission on Tuberculosis had made a number of recommendations which could not be ignored. It had declared that human and bovine tuberculosis cannot be distinguished, that no doubt child tuberculosis is the direct result of the bacillus of bovine tuberculosis, and that cow's milk which contains bovine tubercle is clearly the cause of fatal tuberculosis in man. Mr. Guinness then agreed that the clauses should be dropped, but Mr. Dickenson pointed out that a strong Government bill was sure to be fought and possibly rejected or seriously modified. Mr. Cooper also strongly deprecated the dropping of the clauses. The President of the Local Government Board took upon himself a most serious responsibility in suggesting this course unless he could secure not only the introduction of a strong bill, but its passage into law. He argued that a strong bill must meet much opposition: for the moment London introduced strong clauses, twelve members representing agricultural constituencies put down amendments to destroy them. The question had been before the House for five or six years; nothing was done under the late Government, and so far nothing under this, except a promise of a bill which might not be accepted in the Upper House. In the end, after a characteristic outburst from Mr. Lupton—who declared his disbelief in children being killed by milk, or that there was any evidence that tuberculosis was conveyed through milk—the bill was read a second time, on the understanding that the milk clauses were to be dropped.

The Notification of Infectious Diseases.—Mr. Tyson Wilson asked the President of the Local Government Board whether, seeing that during the year 1907 the deaths occurring from three infectious diseases that are not

compulsorily notifiable were 30,249, while the deaths from ten infectious diseases that are compulsorily notifiable were only 8,629, he could see his way to include the three diseases that are not compulsorily notifiable in the list of those that are, or, otherwise, remove some of those diseases that had to be notified from the list. Mr. Burns said he was not empowered by the Infectious Diseases (Notification) Acts, 1889 and 1899, to adopt either of the courses suggested. It was, however, competent for the sanitary authority of any district, with the approval of the Local Government Board, to order that the Act of 1889 should apply in their district to any infectious disease other than a disease specifically mentioned in that Act, and the Board had given its approval to orders made by various sanitary authorities extending the Act to the three diseases referred to in the question. The Acts did not apply to London, but there were provisions similar to those contained in them in the Public Health (London) Act, 1891.

Death from Glanders.—In answer to a question last week, Sir Edward Strachey said that the Board of Agriculture was aware of the unfortunate circumstances concerning the death from glanders of Charles Edward Davis. The attention of the London Council Council was directed to the case, and the horses in the stables where the man was employed were at once inspected. Glanders was found to exist, and the necessary steps were being taken to deal with the outbreak. The County Council had taken the matter up with great energy, and the Board was satisfied that it was taking every necessary precaution.

Navy (Medical Branch).—On Tuesday Mr. Bramsdon asked the First Lord whether his attention had been called to the case of the four head ward masters who were the only warrant officers in the entire medical branch of the Royal Navy; was he aware that ordinarily they were unable to attain that rank until roughly 40 years of age, when nearing the end of their service, whilst all other branches of petty officers, with the exception of school masters, for whom special provision was made, were able to get promotion to the warrant rank from the age of 25 and upwards, but none after 35, and that their pay consequently was only equal to that of the young warrant officers of other branches; and whether he would give consideration to this class. Mr. McKenna replied in the affirmative.

The Committee on the Midwives Act.—In answer to Mr. Clynes, who asked if the Departmental Committee could be made to include a representative of the National Association of Midwives, Mr. Burns said that he had been in communication with the Privy Council on this subject, and he found that, in the opinion of the Lord President, the Committee was sufficiently large for the practical objects of the inquiry, and that these would not be served by the addition of representatives of special interests. Their views would be properly considered in connexion with any evidence that might be given.

Water Supply.—Last week, in answer to Mr. Courthope, the Prime Minister said that the honourable member was no doubt aware of the recommendations made by the Royal Commission on Sewage Disposal in their third report with regard to the waste of water and its abstraction from one district for distribution in another. These recommendations had received the consideration of the President of the Local Government Board in connexion with the bill relating to Rivers Pollution and Water Supplies which he hoped to introduce this session. In these circumstances, the appointment of a further commission, as suggested, seemed to be inexpedient.

Street Accidents (Doctors' Fees).—Mr. Weir asked the Secretary of State for the Home Department whether, having regard to the fact that doctors receive 3s. 6d. only for attending casualties in the streets, whereas veterinary surgeons receive 10s. 6d. for attending injured horses, he would take such steps as may be necessary to secure the more adequate remuneration of doctors. Mr. Gladstone said that the cases were not parallel. The fee of 3s. 6d. (7s. 6d. after 7 p.m.) paid to medical men represented as much, or more, than the ordinary practitioner would receive for attending patients of the class whom he was called to attend by the police. For exceptional cases, a special fee was sometimes paid. Moreover, the majority of these fees were paid to divisional surgeons, who received them in large numbers, and were, besides, paid salaries from the Police Fund. Veterinary surgeons had far fewer cases to attend, and had generally greater distances to travel. He was satisfied that the medical men in question did receive "adequate remuneration" for the services they rendered.

Death-Rates in England, France, and Germany.—In answer to questions put by Mr. Lyulph Stanley, Mr. McKinnon Wood said that the following were the figures for the year 1907:

Country.	Deaths per 1,000.
England and Wales	... 15.0
France	... 20.2
German Empire	... 18.90
City.	
London	... 14.6
Paris	... 18.5
Berlin	... 15.4

With reference to deaths of infants under 1 year, the following were the figures for the year 1907:

Country.	Deaths per Cent.
England and Wales	... 11.8
German Empire	... 17.6

In the case of France he had no later figure than that of 1906, which was 14.3.

City.	Deaths per Cent.
London	... 11.6
Paris	... 10.5
Berlin	... 16.3

Vaccination Prosecutions in Ireland.—Mr. John Robertson called Mr. Birrell's attention on Tuesday to a case of prosecution, and asked for some legislation to enable conscientious objectors in Ireland to avoid prosecution, as in Great Britain. Mr. Birrell answered that in December last the guardians' solicitor obtained an Order at Petty Sessions, under Section 147 of the Public Health Act, to compel Mr. Francis Irvine to have his two children vaccinated within a month. The Local Government Board had no means of knowing whether notice had previously been served on him. That was a point for the consideration of the magistrates. Having failed to comply with the magistrates' order, Mr. Irvine was fined 2s. 6d. and 5s. costs at Petty Sessions on February 19th, as stated. He was informed that legal proceedings were usually instituted against a defaulter under the Vaccination Acts before steps were taken under Section 147 of the Public Health Act, and this course was presumably followed in the present case. The number of conscientious objectors to vaccination in Ireland was very small, and they were not, he understood, generally subjected by guardians to repeated prosecutions. He could not undertake to introduce legislation on the subject.

The Island of Lewis.—Mr. Weir asked what was being done to improve the sanitation of the townships which had been reported to be dangerous to the public health. Mr. Ure replied that since the publication of the report in question there had been steady progress in the sanitary improvement of the crofters' houses. The construction of houses on new sites was a solution which presented many administrative and financial difficulties, and he had not found it possible to approach the Treasury on the matter; but this and other questions affecting administration in the Lewis were constantly before him.

The Oaths Bill to facilitate taking the oath with uplifted hand was read a second time late on Tuesday night, and will in due course be considered by a Standing Committee.

Vivisection.—Mr. Hodge introduced a bill for the total abolition of vivisection on Tuesday, and put down the second reading for May 29th.

India.

THE BOMBAY MEDICAL CONGRESS.

ON February 22nd this great congress was opened by Sir George Clarke, F.R.S., the Governor of Bombay, who delivered an eloquent address reviewing the progress of medical research in India. The commemorative medal was then presented by him to several distinguished visitors, including Professor Ronald Ross, and Professor Musgrave of the Philippine Islands. At a later meeting a medal was also presented to Professor Shiga from Japan, who had not been able to be present at the opening meeting.

The five sections held both morning and afternoon sessions on three days, and in some cases a morning session on the fourth; the afternoon of that day the members were invited to visit the Parel laboratory. The number of members was very large, including over 100 I.M.S., a few R.A.M.C. officers, and numerous Parsee and Indian practitioners, leave having been granted to many assistant surgeons to enable them to attend. Every province of India and all branches of medical science were well represented; there was a good attendance at all the sections, while certain subjects attracted very large crowds, so that the proceedings were frequently quite enthusiastic. The meetings were all held in the magnificent University buildings, which form one of the main architectural features of this beautiful city, while immediately in front of them was placed the exhibition, a tent in which was accommodated the Sanitary Section. The whole of the arrangements were most admirably organized by the Secretary, Lieutenant-Colonel W. E. Jennings, I.M.S., to whom the thanks of all were due.

The Work of the Sections.

The great attraction on the first day was the discussion on antimalarial measures in India, introduced in an exhaustive paper by Professor Ronald Ross, F.R.S.; it was followed by other papers by Captain Christophers and Dr. Bentley on their investigations on blackwater fever, and by Major S. P. J. James, I.M.S., on the great prevalence of malaria in Mian Mir cantonment last year in spite of vigorous antimalarial operations. The latter paper in particular gave rise to a very keen discussion, during the course of which it appeared that the very heavy rains of last year had much to do with the admitted failure of the antimalarial operations, but that better results might be obtained if drainage operations were added to the previous programme. The generally expressed opinion was that in most Indian conditions quinine prophylaxis was more practicable than mosquito destruction. On the second day the papers on plague prophylaxis gave rise to an equally interesting and keen debate, the relative importance of recrudescence or reimportation as the cause of the repeated yearly outbreaks in the Punjab being the main subject of contention. In the first section the discussions on the treatment of cholera and on dysentery attracted considerable attention, and that on the treatment of snakebite was also of considerable interest. Another very important contribution was one by Dr. Row on the development of the parasite of Delhi boil into a flagellate stage, precisely parallel in its general characters to that of the *Leishmania donovani* of kala-azar, although it appeared to differ in some details, so that it will probably prove to be a different variety of the genus. In the Surgical Section the subject of operations for cataract was the most important dealt with, a number of papers being read in support of the intracapsular operation of Smith of Jullunder.

Pathological Section.

One of the most interesting and best organized of the sections was the pathological; the exhibition, which contained a large number of microscopical preparations, illustrating the more important researches in tropical medicine, including Row's Delhi-boil cultures, having been arranged. A number of coloured drawings of skin and bowel diseases were shown from the Calcutta Medical College Museum, and a good collection of snakes by Major Wall, I.M.S. Captain Cunningham, I.M.S., deserves great credit for the excellent collection he had got together from all parts of India.

Conversazione.

On the second evening a series of lantern lectures on medical subjects of twenty minutes each were given, and were attended by a very large number of the members and their friends. The subjects treated included the nastin treatment of leprosy, the parasite of Delhi boil, blood sucking insects, snakes and fevers, etc. This meeting, which was a great success, was held in the grounds of the exhibition, and intervals were allowed between each lecture, social and instructional opportunities being thus combined.

Indian Medical Service Dinner.

Well over one hundred officers and guests sat down to the dinner on the evening of the last day after the visit to Parel Bacteriological Laboratories. The Governor of Bombay was present, and Surgeon-General Sir Gerald Bomford took the chair. The speeches were few but good, the chairman pointing to the great advances in research work in India since the last congress in Calcutta fifteen years ago. Professor Musgrave, from the Philippines, returned thanks for the visitors, and struck the same note, while Professor Ross was also called on to speak.

The gathering has thus been a notable one in many respects, and it is to be hoped it will be repeated at a much shorter interval than the last.

Natal.

IMPORTED COOLIE LABOUR.

Two of the principal newspapers published in Durban, the *Natal Advertiser* and the *Natal Witness*, contain in their issues for the first week of February copies of correspondence between a medical officer lately in the employ of the Indian Immigration Board and the Chief Secretary to the Government relative to his dismissal from his appointment, and in each case the editors of these newspapers, after considering the facts, call for explanations from Government. These in one form or another will doubtless be given during the course of the approaching session of the Natal Legislature; but meantime, it may be said, that the facts revealed are sufficient in themselves to condemn the arrangements under which medical officers in charge of indentured coolies do their work. About eighteen months ago, by way of rendering them less subject to the caprices of those who are the common employers alike of themselves and of the coolies, these officers were given by the Legislature a right of appeal to the Governor in Council should their dismissal be proposed by the Indian Immigration Board. This right was exercised for the first time in the case which is the subject of the correspondence and comments mentioned, and the fashion in which the appeal was treated is instructive. The medical officer was at first merely informed that the Governor in Council had rejected his appeal, but subsequently extracted the information that what had really happened was that the Government made certain "recommendations" to the Indian Immigration Board respecting the proposed dismissal, that this board declined to fall in with them, and that the Government then subsided. The intention of the law was undoubtedly that the Government should impartially review the decisions of the board, and either confirm or set them aside, according to its view of justice; by merely making "recommendations" and allowing the board to fall in with them or otherwise, as it pleases, the right of appeal seems to be reduced to a farce. The circumstances of the case render the treatment of the appeal all the more striking. The officer in question was given six months' notice at the beginning of 1908, but before the six months was up the board withdrew the notice of dismissal and offered him a better-paid appointment of the same character in another district. This offer the officer did not see his way to accept, and thereon he was redismissed without explanation of any kind. It is clear from this sequence of events that any ground of complaint which the board may have had against this officer can scarcely have been of such character as to justify his dismissal, and consequently that the law conferring the right of appeal has failed in its object. This is the more important when it is remembered that

that right was accorded less in justice to medical men than for the sake of their coolie patients. It was tardily recognized, in short, that the latter were likely to suffer if the board could exercise an uncontrolled power of dismissal over any medical officer whose ways of dealing with coolies did not chime in with his employers' views of what was convenient to his interests.

The net outcome of the incident is to strengthen the hands of those who for a long time past have been anxious to see the status of medical officers in charge of imported labour completely changed. Finally, as a possible factor in the fate of this particular officer, it may be mentioned that he was conspicuous for his scientific zeal in tracing certain obscure maladies among the coolies to their true source. He was one of the first to show that this was ankylostomiasis infection, and that this grave disease was being imported into the colony by coolie-bearing ships and spreading among the general population. This revelation naturally caused considerable alarm, and was most inconvenient to the board and its estate-owning constituents, for, besides involving more or less expense, it helped on the movement in favour of appointing a Commission to consider the question of the propriety of allowing the importation of coolie labour to continue. That Commission is now sitting, and its terms of reference specifically include consideration of the medical arrangements for the care of coolies working on estates. It was, indeed, allegations made by a medical officer on resigning his appointment under the Immigration Board last autumn which gave the local press and public a weapon by which to force an inquiry upon Government. The party representing the interests of estate owners and in favour of imported coloured labour is powerful, so the final outcome of the inquiry is doubtful, but it is to be hoped that in future medical officers who look after coolies will do their work as Government officers and not as privately employed officials; or, in other words, that Natal in this respect will fall into line with all other British coolie-importing countries.

Since the Government of Natal does not enjoy a very desirable reputation as an employer of medical labour, medical officers of the Indian Immigration Board may possibly be not anxious to change masters, preferring the frying pan to the fire. There are, however, only some twenty of them in all, at least half being already Government officials as well as medical officers in the employ of the Immigration Board, and in any case, even should they prefer to remain as they are, general and not individual interests must necessarily be considered. When an important Government official, such as the Protector of Indian Immigrants, frankly condemns, as recorded in our issue for September 19th, 1908, the present system of appointing coolie medical officers as unsound in principle and detrimental to the coolies in their charge, and when, not regarding them as free agents, but as servants of the estate owners, he publicly declines to ask for any reports from them, it is clear that there must be a prima facie case for investigation. Furthermore, he has adopted the same course in reference to the year 1908, and meantime information received by this JOURNAL from a variety of sources all tends to show that the attitude which he has adopted—doubtless by way of bringing things to a head—is well founded, and that the view which he has expressed—namely, that to carry out their duties satisfactorily medical officers in charge of coolies should, as in all other colonies, be made independent of estate owners—cannot be controverted. When the decision of the Protector of Indian Immigrants was recorded in these columns at the date mentioned, note was also made of the case of a medical officer who, "finding his position intolerable," had recently resigned his appointment, and the opinion was stated that an inquiry into the general subject of the medical care of coolies ought to be held. This addendum has elicited the following communication:

> We, the undersigned, being Indian Medical Officers of Circles in Natal, were surprised to find a statement in the BRITISH MEDICAL JOURNAL of 19th September, 1908, implying that we were dissatisfied with our positions under the Indian Immigration Trust Board of Natal.
>
> We entirely object to this statement, and wish to protest against it. We have not found our positions "intolerable," but, on the contrary, we have always been treated with due consideration and courtesy.

This letter, which, curiously enough, was not sent off until four months after the publication of the passage in question, bears the signatures of fifteen of the medical officers. The rest, it may be assumed, considered it somewhat foolish to "protest" against a statement which had not been made. Why the document was originally circulated for signature is another question, and in any case the contained expression of satisfaction does not outweigh the evidence as to the real feeling within the service which has been otherwise received; nor does it lessen our belief that a complete change of status in the case of coolie medical officers is desirable alike in the interest of the indentured labourers, the general public, and the medical officers themselves.

Sydney.

[FROM OUR SPECIAL CORRESPONDENT.]

NEW SOUTH WALES BRANCH OF THE BRITISH SCIENCE GUILD.

A MEETING was held last December to inaugurate the New South Wales Branch of the British Science Guild. The chair was taken by Dr. F. A. Bennet, who, after apologizing for the absence of Sir Normand MacLaurin, explained that the meeting had been called for the purpose of forming a science guild in Australia. The objects of the guild were:

(1) To bring together as members of the guild all those throughout the Empire interested in science, in order that, by joint action, they might convince the people of the necessity of applying the methods of science to all branches of human endeavour, and thus to further the progress and increase the welfare of the Empire. (2) To bring before the Government the scientific aspects of all matters affecting the national welfare. (3) To promote and extend the application of scientific principles to industrial and general purposes. (4) To promote and extend scientific education by encouraging the support of universities and other institutions where the bounds of science are extended or where new applications of science are devised.

The Chairman referred to the fact that for years it had been recognized that Great Britain was losing ground, while America and Germany were making great strides. England did not produce enough scientifically-trained young men to second the efforts of the scientific heads of industries. America was alive to the necessity of making science the basis of all industrial endeavour.

Dr. Walter Spencer submitted the report of the organizing commissioner. He referred to the enthusiasm which attended the formation of the British Science Guild when all the leading statesmen, scientists, philosophers, and manufacturers of the empire met together. He contrasted the Germany of sixty years ago with the great empire of to day. The guild had granted £10 towards the expenses of formation of an Australian Branch. So far all the expenses of the Branch had only amounted to £6 10s. A special vote of thanks was accorded to Dr. Spencer for his work in organizing the Branch. Sir Normand MacLaurin was elected President, and several medical men were elected Vice-Presidents. Dr. Walter Spencer was elected treasurer and secretary, and also chairman of the sub-committees.

UNIVERSITY REFORM.

The Senate of the University of Sydney has recently been considering the question of university reform. Two proposals have been considered. The one is to do away with the principle of life tenure of office by senators; the other is that a rector should be appointed at a salary, his only duty being to govern the University. After considerable discussion of these two questions, it was resolved to appoint a committee to consider them further. The committee appointed was: Sir Normand MacLaurin (Chancellor), Dr. Cullen (Vice-Chancellor), Judge Backhouse, Professor MacCallum, Mr. Leverrier, and Mr. H. C. L. Anderson. The committee will probably bring within the scope of its inquiry the whole constitution of the University, and it is considered very likely that it will recommend some change in the life tenure. In consequence of the death of Sir Arthur Renwick there is a vacancy on the Senate, and two candidates have been nominated, Drs. C. Purser and Camac Wilkinson. Both candidates are strong on the need of university reform, and are in favour of a modification in the tenure of office by senators.

State Children.

The annual report of the State Children's Relief Board has been presented to Parliament. The President, the Hon. Dr. C. K. Mackellar, signs the report, which states that the total number of children under departmental control at the date of the report was 7,835, representing an increase of 786 over the number for the previous year. Of these, 4,202 were placed out apart from their mothers, and 3,633 with their mothers. The proportion of boarded out children to the population of the State was 4.95 per 1,000. The proportion of children boarded out apart from their parents stood at 2.65 per 1,000. For several years past this proportion had remained stationary, and represented the class which, under the barrack system, would be maintained in orphan schools. The proportion of children boarded out with their own mothers had risen unusually, being 2.29 per 1,000, as against 1.96 per 1,000 in the previous year. The increase was attributed to the greater cost of living—due to the tariff—compelling an additional number of mothers to apply for aid on behalf of their children. The expenditure for the entire services of the department was £75,910. Of this total expenditure, £37,685 was for maintenance, cost of clothing, medical fees, and proportion of travelling expenses for the children boarded out apart from their parents. Deducting the contributions by parents, the actual cost to the State of each child was £15 10s. 2d. During the year 418 boys and 304 girls were discharged from control, leaving under supervision at the end of the year a total of 4,202 children. The total admissions during the year exceeded those during 1907 by 204, and the total discharges was greater than that for the previous year by 160. These figures, to a very large extent, indicate the operations of the children's courts so far as the number of admissions is concerned; the increased number of discharges show the policy of the board, which is to send the children home again as soon as improvement has been manifested in their conduct.

Canada.

[From our Special Correspondent.]

Militia Medical Officers of Canada.

The annual meeting of the Association of Medical Officers of the Militia of Canada, held at Ottawa on February 25th and 26th, under the presidency of Colonel Ryerson, M.R.O., was well attended. Addresses were given by the president and by Major-General Sir Percy Lake, K.C.M.G., Inspector-General, and the following officers were elected for the ensuing year:

President: Lieutenant-Colonel H. S. Birkett, Montreal.
Vice-Presidents: One from each military district—Major Rankin, M.P.; Lieutenant-Colonel G. S. Rennie, Major Kilborne, Major E. R. Brown, Captain Williams, Major E. A. le Bel, Lieutenant-Colonel Murray MacLaren, Lieutenant-Colonel Currie, Lieutenant-Colonel Blanchard, Captain McTavish, Lieutenant-Colonel Jenkins, Captain S. W. Hewetson.
Secretary-Treasurer: Lieutenant T. H. Liggett, Ottawa.

The following resolution, of which Lieutenant-Colonel Jones, P.A.M.C., had given notice at the last annual meeting, was adopted:

> That this Association of Medical Officers of the Militia of Canada expresses its approval of the scheme of forming in Canada an association having for its object the development of Ambulance and Red Cross work in the Dominion.

A number of papers were read, including one entitled, Impressions of a Month at the Royal Army Medical College, London, by Lieutenant-Colonel Fotheringham, P.M.O., M.D.; another on the Routine Work of the Sanitary Officer at Camps of Instruction, by Captain Clark, P.A.M.C.; and another on the Trek of a Field Ambulance, by Major T. B. Richardson, A.M.C.

The next annual meeting of the association will be held at Ottawa on February 24th and 25th, 1910.

Proprietary Drugs.

Under regulations adopted by the Government of the Dominion of Canada with regard to the manufacture and sale of patent or proprietary medicines, all such patent or proprietary medicines in the hands of manufacturers or dealers shall bear the stamp of the Department of Inland Revenue, but this stamp will not be provided for drugs or medicines containing cocaine or its derivatives; under the Patent Medicine Act importation or sale of such after April 1st, 1909, is prohibited.

Spitting in Railway Cars.

The railways of Canada have all, at the solicitation of the Montreal Board of Trade, been sent copies of the draft order of the Board of Railway Commissioners regarding spitting in cars, and will appear to submit their views. The draft order requires every railway company within three months—

1. To properly clean and disinfect and thereafter to properly keep clean and disinfected its passenger cars, stations, and waiting rooms, in order to prevent dissemination of tuberculosis or other infectious or contagious diseases.
2. To cause printed notices to be placed and maintained in each of its passenger coaches, one in each end of the car, and in some conspicuous place in each of its stations and waiting-rooms, prohibiting the practice of spitting in the said cars, station, and waiting-rooms, except in proper receptacles provided for the purpose, and prescribing a penalty for violations thereof.
3. That every such railway company be liable to a penalty of a sum not exceeding fifty dollars for every failure to comply with the foregoing regulations within the time for their coming into force and thereafter.

England and Wales.

[From our Special Correspondents.]

Manchester and District.

The Epidemic of Influenza.

The epidemic of influenza is so widespread in Manchester at present that the medical officer of health, Dr. Niven, has thought it necessary to have large bills posted up all over the district, giving hints for prevention and treatment. Last week 8 deaths were notified as directly due to influenza, and the fatal cases of pneumonia were especially numerous. Last year the highest figure for deaths in one week from pneumonia was 47, but last week 57 were recorded. In many cases of influenza this year typhoid characteristics are prominent, and most patients are troubled with a constant tickling cough. The acute stage often lasts from ten to fifteen days, and is followed by considerable weakness and depression. Dr. Niven draws particular attention to the need for isolation, especially in the case of first attacks in the household. He says that persons attacked "should not on any account join assemblages of people for at least ten days from the commencement of the attack." There is fear that these directions about isolation will be largely disregarded, in spite of the fact that every one knows perfectly well how infectious the disease is, and nothing short of compulsion will procure proper isolation. Next to isolation, perhaps, the most important suggestion given by Dr. Niven is that "discharges from the nose and mouth should not be allowed to get dry on the pocket handkerchief or inside the house or workshop. They should at once be collected on paper or clean rag and burned, or, if this cannot be done, the paper or rag should be dropped into a vessel of water, while infected articles and rooms should be cleansed and disinfected." Other valuable suggestions for prevention are given which afford a good example of the way in which municipal authorities may proceed in preventive treatment for the whole community, in contrast with the so-called curative treatment for paupers only with which boards of guardians seem bound to be content.

A Doubtful Cause of Death.

A somewhat unusual case was investigated last week at Pendlebury which may have the effect of still further lengthening the list of occupation diseases for which compensation may be claimed. It appears that an elderly man who had been for twenty-one years a sexton at Pendlebury, while engaged in digging a new grave in the churchyard accidentally opened with his pick an old brick drain from which a most offensive effluvia came. He complained the same night of feeling ill, and soon began to suffer from severe diarrhoea. It was found necessary to call in Dr. David Owen, of Irlams-o'-th'-Height, who found him suffering from diarrhoea and pneumonia, from

which he eventually died. Owing to the unusual circumstances, the coroner was informed, and thought it right to hold an inquest, with a *post-mortem* examination. At the inquest Dr. Wright, of Ancoats Hospital, said that he had made a *post-mortem* examination, and agreed with Dr. Owen that the cause of death was acute pneumonia. It was quite possible that the diarrhoea which commenced the illness might have been caused by the bad effluvia, and in favour of this was the fact that deceased had had similar attacks before following exposure to similar exhalations. Dr. Owen said that on February 22nd he found deceased suffering from diarrhoea and pneumonia. After a few days the case seemed somewhat favourable, but another attack of diarrhoea set in, and he gradually sank. Dr. Owen had known the man for ten years, and had attended him before for diarrhoea. On one occasion he had called in the late Professor Leech of Manchester in consultation, and they agreed that there was some reason for thinking that the noxious emanations from old graves might have caused a malignant form of diarrhoea, and the man was advised to give up the occupation of gravedigger. Witness entirely agreed with the evidence from the *post-mortem* examination that the cause of death was pneumonia, but he referred to several authorities to show that cadaveric exhalations were recognized as a cause of disease and death. In the *Nomenclature of Diseases*, issued by the Royal College of Physicians, "putrid exhalations" were given in the list of poisons. A member of the jury said he thought that death had been caused by diarrhoea set up by the bad smells, but the coroner pointed out that the doctors' evidence only showed that that was possible, though it could not be proved, and the jury would be treading on dangerous ground; the *post-mortem* examination exactly tallied with what Dr. Owen had certified—that death might have been caused by the exhalations. Ultimately a verdict was returned of death from natural causes. The case is interesting not only from a medico-legal point of view but scientifically, and may be noted in connexion with an investigation that is now going on in Manchester as to the effect of sewer gases on the public health.

Small-pox Infection from Cotton.

The possibility that small-pox can have been conveyed to England from Egypt by means of raw cotton has been suggested by the medical officer of health for Bolton, where two sporadic cases have recently occurred. A cotton worker was found to be suffering a few weeks ago, and no definite source of the infection could be found after the strictest investigation. A second case, also in a cotton worker, occurred soon afterwards, and it is understood that the two cases had had no connexion with one another, and were employed at different mills. In Stockport also a case has occurred in a cotton worker. Three cases altogether have been found in Stockport, but it is known that two had been in contact with the first. As far as can be ascertained, no further case has occurred, and after the measures that have been taken, it is not likely that the disease will spread. In the year 1901 a sporadic case occurred in Stockport, and Dr. Meredith Young, then medical officer of health for Stockport, expressed the opinion that the disease had been conveyed in cotton. At that time it was found that there was a mild epidemic of small-pox among the natives employed on the cotton plantations of Texas and the Southern States where the cotton came from. There had been no case in the town for fully a yearly previously, and the man who was attacked was engaged in opening the bales and feeding the raw cotton into the machines. At the present time some of the cotton comes from Egypt, and it seems that small-pox is somewhat more prevalent there than usual. It is the custom of the cotton workers, in manipulating it, if a strand should get broken to piece it up by wetting it with saliva, and any infective material might thus readily get into the mouth. As no very effective means are taken to cleanse the cotton before arrival in England, and as many of the cases of small-pox may be slight and easily overlooked among the natives on the plantations, even if the present cases cannot be proved to have been actually caused in this way, it is evident that some danger may exist. The bales of cotton are so tightly packed, as a rule, that it is hardly likely that any infected material would be sufficiently exposed to the air to cause any great attenuation of the virus.

NEWCASTLE-UPON-TYNE.

Medical Inspection of School Children.

The increased work thrown upon Dr. George Foggin, the Medical Inspector of Schools, has rendered necessary the appointment of an assistant—Dr. R. Rutherford. Every facility has been afforded to these gentlemen by the Education Board as regards provision of office, rooms, and clerical assistance.

Maternity Hospital.

At the annual court of governors of the Newcastle Maternity Hospital, presided over by the Lord Mayor of the city, it was reported that 1,108 outdoor cases were attended mainly by the students and nurses, while 227 patients were admitted into the hospital during 1908—an increase of 222 outdoor and 16 indoor cases compared with the numbers for 1907. Negotiations are in progress for the sale of the present site and the purchase of another for a new hospital, which is considered to be a necessity. During 1908 three examinations were held in the hospital under the regulations of the Central Midwives Board.

Edinburgh University Club.

The members of the Edinburgh University Club held their annual dinner in Tilley's Rooms under the presidency of Dr. W. S. Campbell on March 12th. The vice-chairs were occupied by Dr. James Smith, of Ryton, and Dr. Goudie, South Shields. The guest of the evening was Professor Francis M. Caird. Sixty gentlemen sat down to dinner. After the loyal toast had been honoured, the President in a happy speech proposed "Alma Mater," and in coupling with it the name of the guest, extended a hearty welcome to Professor Caird. Before sitting down the company sang "Gaudeamus." Professor Caird had a most cordial reception, and to all assembled his reply, which was full of anecdote and of interesting reminiscences of Edinburgh professors, teachers, and infirmary officials, was a source of extreme delight, heightened when Professor Caird brought his interesting remarks to a close by his singing two verses of an old song. To Dr. Hume was entrusted the toast of "Sister Universities," and by none could it have been better rendered. Sir Thomas Oliver responded. In a very appropriate speech the health of the President was proposed by Dr. Bunting, who alluded to the important part Dr. Campbell had played in the foundation and development of the club. Under the genial guidance of the chairman a most pleasant evening was spent. The toast list was short, and this gave the meeting a distinctly social character, and allowed more opportunity for song and conversation. The musical part of the proceedings was much appreciated. To the pleasure of this Professor Caird, who was quite at home among friends and old fellow students, in no small degree contributed. Much of the success of the banquet was due to the excellent arrangements made by the honorary secretary, Dr. T. Gowans.

WEST YORKSHIRE.

The Sanitary Condition of Harrogate.

The Sanitary Committee of the Harrogate Town Council has lately had under consideration a report by Dr. Spencer Low to the Local Government Board on sanitary matters as affecting the borough. As a result of this, certain recommendations have been formulated by the Sanitary Committee, which were brought before the Town Council on March 8th, and after considerable discussion were eventually adopted. These recommendations were:

1. That the corporation should take steps to appoint two additional men to assist the inspector of nuisances in an inspection of all house drains in the borough.
2. That the corporation should make application to the Local Government Board for an order putting in force in the borough Section 25 of the Public Health Acts Amendment Act, 1907, with respect to the forming, flagging, asphalting, or paving of yards to dwelling-houses, for the effectual drainage of the subsoil, or surface of the yards, to a proper outfall.
3. That notices should be given to the owners of two disused underground bakehouses that the premises must not be again used as bakehouses.
4. That a subcommittee be appointed to seek a conference with subcommittees of the rural and urban district councils of Knaresborough with a view to the three authorities appointing

a joint meat, milk, and cowsheds inspector for the whole area of the three districts.

5. And that a subcommittee of the corporation inquire into the advisability of appointing a medical man to devote the whole of his time to the duties of medical officer of health and education medical officer for the borough.

Owing to the popularity of Harrogate as a residential and health resort, its sanitary condition is not only a matter of local but of national concern; it should be above suspicion.

The Treatment of Phthisis in the Bradford Workhouse.

The Bradford Board of Guardians has recently had under consideration the danger to the general inmates of the hospital from the presence amongst them of cases of phthisis. The guardians on February 24th had 120 cases of phthisis and only proper accommodation for 79, so that 41 cases were in the ordinary hospital wards. They determined to erect a temporary structure near the present premises to accommodate these patients, but their plans have been vetoed by the Local Government Board for the following reasons:

1. Owing to the proximity of the proposed building to the boundary of the site and to the neighbouring dwellings.
2. To the impossibility of securing a favourable aspect.
3. To the impossibility of arranging a building on the limited area so as to secure sufficient cubic space for the number of occupants and of dividing the building into sections so as to form smaller groups of patients in the wards and of giving the benefit of some open-air treatment.

Phthisis Amongst Stone Workers.

Dr. Edwards, M.O.H., at the meeting of the Southowram (Halifax) Urban District Council, held on March 2nd, submitted his annual report, and drew special attention to the death-rate from phthisis. Southowram, situated on the top of Beacon Hill, and considered one of the healthiest parts of Halifax, had a very high death-rate from phthisis. The population of the district is about 3,072, and the chief industry quarrying. Dr. Edwards attributes the prevalence of the disease to stone dust, and believes that the disease might be considerably diminished if the workers could be persuaded to wear some kind of respirator to prevent the inhalation of the stone dust. He recommends that pulmonary consumpton should be included amongst the notifiable diseases.

LIVERPOOL.

A New Maternity Hospital.

At the annual meeting of the Ladies' Charity and Lying-in Hospital it was pointed out that the present hospital, with about twenty beds, was inadequate to meet the requirements of a large city like Liverpool with its unusually large proportion of poor. Sir William Hartley, in speaking to the adoption of the annual report, announced his intention of erecting a new maternity hospital, to provide bedroom accommodation for seventy-five persons—say, fifty patients and twenty-five staff and pupil midwives. The cost is to be £15,000, including the building, furniture, and equipment in every particular, with passenger lift and suitable laundry. The committee is to provide the site, and a sum of £20,000 is to be raised as a maintenance fund, to be expended during the first fifteen years. It is expected that the construction of the hospital will take about eighteen months. Sir William Hartley expressed the hope that the hospital would become a great teaching centre, and that many medical students would get their maternity training there. He desired a medical woman to be included in the resident staff, and expressed the opinion that it was in the interest of the hospital and also of the community that the medical staff should retire at a somewhat earlier age than has been usual hitherto, and thus give an opportunity for a larger number of medical men to gain experience in the new institution. On this suggestion it may be observed that the retiring age has recently been fixed at 60, the limit which holds at the Royal Infirmary, the Northern Hospital, and the Stanley Hospital. Sir William Hartley's munificent support of the medical charities of Liverpool, and his enlightened interest in their welfare, are universally acknowledged, but there can be no doubt that by the present gift he has not alone done an immense service to the poor of the city, but by providing a wider field and an adequate provision for the teaching of practical midwifery has conferred a great boon on the medical school and the university.

Medical Officer to the Police.

It is a matter of great regret that the movement started in the local Divisions to induce the city council to grant better terms to the medical officer to the B Division of the police has not been successful. Dr. W. J. Bennett Jones has been appointed at a salary of £60 per annum, to be increased to £80 per annum after five years' service.

WALES.

The Ebbw Vale Dispute.

We learn from the *Western Mail* of March 16th that the dispute between the directors of the Ebbw Vale Workmen's Fund and the medical men employed under the fund entered on a new stage on March 15th. The various phases of the dispute need not be related here. Those of our readers who are interested in the matter have had abundant opportunities of following the sequence of events. It need only be recalled that when the medical men formerly employed under the fund were replaced by practitioners not members of the British Medical Association, a large number of workmen in the Cwm and Waunllwyd district, owing to their confidence in Dr. John Sullivan, one of the dismissed doctors, gave notice to the Ebbw Vale Company to desist from making any more deductions from their wages towards the Ebbw Vale workmen's doctor's fund, and Judge Owen ordered that the contributions during a period of six months should be refunded. This award placed the fund in serious financial difficulty. The liability altogether amounted to over £1,000. Mr. F. Mills was asked to intervene, and the following provisional agreement was proposed:

That, in view of the contents of Mr. Mills's letter of the 24th ult., wherein it was stated that Dr. Sullivan had decided to waive all claims that he might have against the doctor's fund entirely, in the interests of peace, the judge's award of £196 3s. 1d. in recent county court actions be dropped entirely. Further, that in settlement of the whole dispute, the fund section offered, and the Cwm section decided to accept, the sum of £150, being the estimated total of the present liabilities of the Cwm section. The whole of the above agreement is subject to the appointment of Dr. Sullivan.

This agreement was at first rejected, but after further negotiations, and after an independent ballot had been taken of the whole of the workmen of the Ebbw Vale and district, it was accepted by a majority of 252. We reserve comment on the matter till we are in possession of full information. In the meantime we wish it to be understood that the facts stated above are taken from the *Western Mail*, with which lies the responsibility for the accuracy of the statements.

Schools Medical Work at Barry.

At a special meeting of the Barry Education Committee held on March 8th, the head teachers of the various schools attended and discussed the proposals of the school medical inspector (Dr. W. Lloyd Edwards) to minimize the clerical work imposed upon head and assistant teachers in carrying out the new regulations. With a few alterations, the scheme adopted provisionally by the committee included the appointment of a school nurse (not necessarily a trained nurse) to assist the school medical officer at the medical inspection, in doing clerical work, such as entering details on cards, etc., the nurse to attend the schools in accordance with a time table. Certain preliminary work, however, would still remain for the teachers to do; the resolution requiring the teachers to test the children's vision annually was rescinded, but the teachers agreed to report particularly bad cases to the school medical officer.

Government Grants to Educational Institutions.

The Civil Service Estimates just issued provide for an additional grant of £15,000 to the Welsh University and constituent colleges. The grant of £20,000 to the University College of North Wales building fund is not repeated this year. The £15,000 is to be apportioned between the

University of Wales and the University Colleges of North and South Wales and Aberystwith. The allocation of the particular amounts to the three colleges and the university will be made later. The estimates also provide for a grant of £4,500 to the National Library of Wales and £2,000 to the National Museum of Wales.

Scotland.

[FROM OUR SPECIAL CORRESPONDENTS.]

UNIVERSITY OF EDINBURGH—HISTORY OF MEDICINE.

IN his third lecture, Dr. John D. Comrie dealt with the early Greek philosophers and physicians, health temples, and incubation. Between the fifteenth and fifth centuries B.C. Asiatic influence had gradually increased in Greece. Within this period the people seem to have lived with a richness to which Latin poets looked back in longing as the "age of gold," and they seem to have dwelt in well-built cities possessed of efficient storage and drainage systems. To this period Aesculapius belongs. His origin is shrouded in obscurity. Homer makes him a chieftain from Trikke in Thessaly instructed in the knowledge of healing herbs by Cheiron the Centaur on Mont Pelion. Homer gives him two sons who fought before the walls of Troy, both of whom were warriors first and then healers. Apollo was the reputed father of Aesculapius, and a goat his foster-mother. The cult of Aesculapius originated in Epidaurus. In early Greece physicians were not very clearly separable from philosophers. The latter took for their province the whole sum of human knowledge. Pythagoras (about 580 B.C.) was one of the earliest of these. He believed in the doctrine of transmigration, enjoined a rigid dietary, with abstinence from flesh, and forbad certain vegetables, especially beans. He valued music in the treatment of diseases, particularly in disorders of springtime and in affections of the mind. He introduced oxymel of squills from Egypt into Greece, and he strongly recommended onions, and exercise in the gymnasium. The earliest physician of whom there is any considerable record was a fellow-townsman of Pythagoras, by name Democedes (born about 540 B.C.). His history is given by Herodotus (Book iii, 130 ff.). From this it would appear that the remuneration of the physician consisted chiefly of gifts, and that the various cities had public medical officers. He left his country and attached himself to Polycrates, who paid him two talents (£487 10s.) for his services. Then he went to Samos. Chiefly to him was due the high reputation of the physicians of Crotona. Democedes successfully treated Darius for a bad sprain of the foot, where the Egyptian physicians had failed. He cured the wife of Darius (Atossa, the daughter of Cyrus) of an abscess in the breast, and thus gained his freedom from slavery. Among the early philosophers who concerned themselves with medical subjects should be mentioned Alkmaeon of Crotona, a follower of Pythagoras, who dissected the eye and originated the theory that the brain is the seat of the soul. Also Empedocles of Agrigentum (495–435 B.C.), who suggested the principle of evolution on which Darwin based his theory. Anaxagoras of Klazomanae, who announced views on sleep and breathing, and held that the chief acute diseases were due to the deposit of bile in the lungs, vessels, pleura, etc, deserves mention. A certain Ctesias, who had probably been a physician in the Greek army of Cyrus, and was taken prisoner at the battle of Cunaxa (407 B.C.), treated the wounds of Artaxerxes, King of Persia, and subsequently visited India. The question of how far Greek medicine was indebted to the medicine of India and how far Indian medicine was indebted to Greece was discussed. Probably Western and Indian medicine developed quite independently, though they derived something from each other in the time of Hippocrates. In his fourth lecture, Dr. Comrie said the famous medical schools of ancient Greece were in Kyrene, Kroton, Sicily, Rhodes, Knidos, and Kos. In some cases, as at Kos, the school sprang up near a temple of Asklepios, but general medicine was a branch of science taught by the philosophers or by the Asklepial families, who retained their secrets with the greatest care. These ancient Greek physicians derived their surgical knowledge from accidents in the gymnasiums and from their practice in their almost constant wars. In the Anabasis of Cyrus and Xenophon military surgeons accompanied the troops. Cure by rest, diet, cheerful surroundings, and suggestion was carried out at the numerous Health Temples throughout Magna Graecia. Epidauros was the best known of these. Its theatre was capable of holding 12,000 persons, and outside the temple precinct was the Stadium capable of holding 20,000 spectators. Thus pleasure helped the return to health. There were sacred wells and baths and lying-in rooms near. Sophocles was in his youth a priest at Epidauros. Incubation was practised. Various cures were described.

WESTERN INFIRMARY APPOINTMENT.

The managers of the Western Infirmary have filled up the vacancy created by the death of Dr. Lindsay Steven by promoting Dr. Wm. MacLennan to be a visiting physician. Dr. MacLennan has served only a few years as assistant physician, but for the past year has been continuously acting in charge of wards, first as substitute for the late Sir Thomas McCall Anderson, and since his death he continued to take charge of the same wards during the prolonged interregnum consequent upon the proposal to transfer the clinical chairs to the Royal Infirmary. During these months Dr. MacLennan has proved a popular and successful teacher. His claims for promotion were felt to be so strong that the managers appointed him to the full physicianship without throwing the post open to competition.

RUCHILL FEVER HOSPITAL.

There seems to have been renewed friction at Ruchill Fever Hospital between the matron and the physician-superintendent. The first public indication of trouble was a recommendation by the Hospitals Committee that the physician-superintendents at Belvidere and Ruchill should change places, Dr. Johnston going to Belvidere and Dr. Brownlee in exchange taking charge of Ruchill. This motion was adopted by a full meeting of the town council, but no discussion was permitted of the reasons which had led to such a step. Since then one of the town councillors has made a long communication to the press which indicates that there was serious friction between the matron and the superintendent. As the statements of the other side have not been published yet, it would be inexpedient to offer any comments, but some of the matron's entries in the logbook are couched in extremely autocratic and peremptory terms, which certainly did not make for peace

Ireland.

[FROM OUR SPECIAL CORRESPONDENTS.]

THE GENERAL ANAESTHETICS BILL.

We have received from the Honorary Secretary of the Incorporated Dental Hospital of Ireland a copy of the following resolutions adopted at a meeting of the staff held recently in Dublin.

First Resolution.

That the members of the staff of the Incorporated Dental Hospital of Ireland, having had under consideration the General Anaesthetics Bill, 1908, as submitted by the Privy Council to the General Medical Council, do approve the general principles of the bill, but are of opinion that the clauses relating to registered dentists should be modified.

They would respectfully point out that dental students, before they present themselves for their final examination, are required to produce evidence of having received instruction in general medicine, surgery, and physiology, as well as in the administration of anaesthetics; they are consequently of opinion that if the course of instruction in the latter subject were made identical for medical and dental students, the same privileges could with perfect propriety be extended to dentists as are given to medical men by Clause 1 of the bill.

In order to give effect to these proposals they would suggest the following amendments to the bill.

1. That Clause 1 should read as follows:

That any person other than a legally-qualified medical practitioner registered under the Medical Acts, *or legally-qualified dental practitioner registered under the Dentists Act, 1878*, who shall wilfully administer or cause to be administered to any other person, by inhalation or otherwise, any drug or substance, whether solid, liquid, vaporous, or gaseous, and whether pure or mixed with any other drug or

substance, with the object of producing a state of unconsciousness during any medical or surgical *or dental* operation, act, or procedure or during child-birth, shall be liable on conviction before a court of summary jurisdiction for such offence to a penalty not exceeding ten pounds, and in the case of a second or subsequent conviction to a penalty not exceeding twenty pounds, provided always that a person shall not be liable to a penalty under this section if in conducting such administration he was acting under the immediate direction and supervision of a legally-qualified medical *or dental* practitioner, or if the circumstances attending the administration were such that he had reasonable grounds for believing, and did believe, that the delay which would have arisen in obtaining a legally-qualified medical *or dental* practitioner would have endangered life.

2. That Clause 2 be amended as follows:

All *licensing bodies in the United Kingdom* recognized by the General Council of Medical Education and Registration of the United Kingdom shall require that all candidates, *both medical and dental*, before presenting themselves for their final examinations, shall have received thorough theoretical and practical instruction in anaesthetics, and shall have personally administered anaesthetics, under the supervision and to the complete satisfaction of their respective teachers.

3. That Clause 3 be deleted.

Second Resolution.

That no legislation which does not deal with local anaesthetics will adequately meet the mischief against which the General Anaesthetics Bill is aimed.

We are informed that the hospital staff comprises twenty dentists, of whom eight hold additional medical qualifications, and eleven medical men who are anaesthetists.

Sanitation in National Schools.

Mr. Kelly, Senior Inspector of the Board of National Education in Ireland, has again drawn attention to the deficient sanitation in national schools. In Belfast, he said, much had been done to improve the condition, but much still remained to be done. The accommodation, which should be 10 sq. ft. for each pupil, was insufficient in 27.7 per cent. of the schools. One school had floor space for 232 pupils, but 331 were present; in another there was accommodation for 18, while 39 were present. In eight schools the ventilation was deficient. During the epidemic of cerebro-spinal fever much more attention had been paid to sanitation by the authorities than would have been given if the epidemic had not occurred. Worse reports come from other parts of Ireland, and it is evident that a radical change is necessary in the control of the sanitation of elementary schools.

Lisburn Sewerage Scheme: Completion of Works.

For some years past a new sewerage scheme for Lisburn has been under construction, and on March 12th the Urban District Council paid a formal visit of inspection, and found the working most satisfactory. The scheme allows for 50 per cent. increase of population. The rain-water from the street is collected into the old sewers, and led direct to the river or the by-wash; that from the roofs into the new, along with the sewage of the town. At the purification works the sewage is passed through two grit or detritus chambers, then through two settlement tanks having a capacity of 375,000 gallons, where the major part of the organic suspended matters are left; these solids are submitted to a septic action by which they are liquefied; the liquid is then passed into one or other of a series of ten contact bacteria beds, which are automatically filled and emptied once in the twenty-four hours. The purified liquid from the contact beds is automatically discharged on to the area of land in possession of the council. These works are considered among the best, if not the best, in the kingdom, and have been carried out very economically at a cost of £54,000, or about £3 a head of population, payable in sixty years. At a luncheon subsequent to the inspection much credit was given to the engineer in charge, and to Dr. St. George and all others who had brought the work to such a successful issue.

Unsatisfactory Vaccination in Belfast.

At the meeting of the board of guardians on March 9th, a letter was read from the Local Government Board intimating that vaccination was not in a satisfactory condition in the union. In 1907, 4,269 defaulters were reported, and of this number 3,044 were returned by the vaccination officer as vaccinated. In 1908, 4,308 defaulters were returned, and up to February 10th, 1909, only 1,035 had been returned as vaccinated; the last figure referred only to certain quarters of the year and certain districts. The medical officers state that many parents do not allow the proper number of marks and the child is removed, and subsequently inefficiently vaccinated. The result is that in many cases the protection against small-pox is not what it should be.

Correspondence.

SLEEP AND WANT OF SLEEP.

Sir,—The very interesting paper of Dr. Farquharson on sleep and want of sleep, which appeared on February 27th, has not provoked any immediate reply, such as it was intended to produce, from some up-to-date physiologist or pathologist. I am writing chiefly to emphasize his request for enlightenment. Of the numerous interesting practical points which he brings out, almost all are within my own experience or observation. The double action of tea is certain and important. I myself am usually put to sleep at once by a cup of warm if not too strong tea; whereas a cup of strong tea taken several hours before bedtime ensures me a bad night. With Dr. Farquharson, I suppose that in the former case the hot water has something to do with the result. People who habitually drink tea are kept awake by coffee, and vice versa. The hot (but not extremely hot) whole-bath or foot-bath seems to act in accordance with Durham's principle. Of hypnotics, I suppose paraldehyde would be among the best, but for its horrible taste. Urethane is little used now; but I have found it safe, agreeable, and moderately effectual. Sulphonal is good, and veronal better, though their comparative insolubility is troublesome. I see a soluble form of veronal advertised.—I am, etc.

John Beddoe, M.D., F.R.S., etc.

Bradford-on-Avon, March 10th.

THE PREVENTION OF DEATHS BY BURNING IN CHILDREN.

Sir,—There are in this country 1,400 deaths annually from burns and scalds in children under 5 years of age. The great majority of these deaths are, with a few simple precautions, absolutely preventable, and it is to this fact that I am anxious to call attention. Think of it—all these hundreds of babies lost unnecessarily each year; think not only of the dreadful waste of infant life, but also of the awful pain and agony of this terrible ending. In addition to those who lose their lives there are an enormous number who are injured in varying degrees, so that the sum total of suffering is appalling. The Legislature has recognized that some action was necessary, and a beginning has been made by Clause 15 of the new Children's Act, which comes into force on April 1st, and which enacts that—

> If any person over the age of 16 years who has the custody, charge, or care of any child under the age of 7 years, allows that child to be in any room containing an open fire grate not sufficiently protected to guard against the risk of the child being burnt or scalded, without taking reasonable precautions against that risk, and by reason thereof the child is killed or suffers serious injury, he shall on summary conviction, be liable to a fine not exceeding £10.

The two most important contributory causes of this very large number of deaths and accidents from burning are (1) the wearing of inflammable garments, and (2) the absence of efficient fireguards.

The chief material used by the poor for the undergarments of children is flannelette. It has the great advantage of being warm and cheap, and the great disadvantage of being very inflammable. But there is no substitute for it within reach of the purse of the poor. I have made many inquiries amongst those who should know, and not one of them could suggest any fabric which could be used in its place. Those materials which will only burn with great difficulty, for example, good flannel, are much too expensive. The varieties of flannelette which are said to be non-inflammable are not really so. I have procured a very large number of samples of flannelette from drapers in the town, of all prices, ranging from 2¾d. to 10¾d. per yard, many of them declared to be non-inflammable, and with the single exception of one, to which I refer below, they all flamed on the application of a match, the dear ones almost, if

not quite, as readily as the cheap. The one exception is a patent material much advertised, especially by coroners, which certainly burns with great difficulty before washing, but which catches fire almost as readily as ordinary flannelette after *repeated* washing, and as the cheapest variety of this costs 6¾d. per yard we can hardly expect the poor to pay this price instead of 2¾d. or 3¾d. for advantages which are so transient. The prevention of these deaths does not depend on the abolition of flannelette garments; this is a quite impracticable suggestion.

On examining the second cause, want of proper fireguards, I am much more hopeful. This fact was present in 85 per cent. of 1,600 inquests held on children dying from burns. The difficulty of getting the poorer classes to use these guards is, of course, their cost. It is the bounden duty of all district visitors, nurses, and others who come in contact with the poor to impress upon them on every possible occasion the great danger which their children run by being left in rooms with unprotected fires. But the best method of prevention that I can suggest is that an addition should be made to the building by-laws of every council rendering it compulsory to fix efficient fireguards to every grate in any new building under a rental value, say, of £26 per annum, erected in the town. I fix a rental value of about £26 because it would not be necessary to compel the fixation of guards in the better class of houses. This is already done voluntarily by the parents in almost all cases where there are children, and in addition they usually have nurses to look after them. As a matter of experience, it is practically always among the poor, where the parents cannot leave any one in charge, that the deaths from burning in children occur.

This by-law would add practically nothing to the cost of a house. I have consulted two expert practical builders in the town, and they tell me that the additional expense for a house costing £350 would be about 30s. to 35s., that is, less than ½ per cent.

My proposal is not merely an academic expression of an ideal. It is well within the function of a municipal council to do this, and I have ventured to write and suggest such an addition to the building by-laws to the Works Committee both of the Brighton and Hove corporations, with what result I cannot as yet say, but I trust they will see their way to adopt my suggestion, and so save many children from a dreadful death, and many more from pain and suffering.—I am, etc.,

Hove, March 9th. L. A. PARRY, M.D., B.S., F.R.C.S.

COLLIERY ACCIDENT STATIONS.

SIR,—In the JOURNAL of February 27th the opening of a colliery accident station at Benwell Colliery, Newcastle-on-Tyne, is reported. I should like briefly to emphasize the necessity for such stations becoming universal at all pit-heads.

Over six years ago, on my initiative as surgeon to the colliery, and with the cordial co-operation of the management, such a station was opened at the Bowhill Colliery, Cardenden, Fife. Nothing elaborate was attempted. A large room was erected with tables on which stretchers could be laid; a hot and cold water supply was laid on, with electric hand-lamps, and cupboards for storing splints, antiseptics, and dressings. Opening off this room was the shed in which the ambulance wagon and the wheeled litter were kept, so that the patient after receiving first-aid treatment was under cover until removed to home or hospital as the case might be. The ambulance room was a useful centre for the meetings of the ambulance corps, and that it made for efficiency was shown by the fact that a team of pit-head men in one year gained the Fife miners' ambulance cup, the Dunfermline Matheson cup, the Dundee silver challenge shield, and was second for the President of the St. Andrew's Ambulance Association's cup at Glasgow—as good a record, I should imagine, as any bona-fide working man's team ever had.

Failing a room of this sort, the patient has to be taken to an engine-room or similar place at a temperature of 65° to 75° F., with the inevitable discomforts of smell and noise.

Such stations should not fall to be provided by private philanthropy, but should be secured by legislative enactment. They are a necessity at every pit-head.—I am, etc.,

DAVID RORIE, M.D.Edin.

Cults, Aberdeenshire, March 15th.

OPHTHALMIC SURGEONS AND SPECTACLE VENDORS.

SIR,—In the JOURNAL of March 13th, p. 693, attention is drawn once again, by "Specialist," to the notorious amount of unqualified practice in eye refraction work. In addition to the optologist, pure and simple, the prescribing chemist has now added "sight-testing free" to his attractions.

I know of one optologist who from selling spectacles has taken to making them, and has, I believe, made himself competent to correct and estimate errors of refraction. If only he were allowed to paralyse accommodation when necessary I believe his results would be correct. Although he acts on his own, he has been taken under the wing of a qualified man who figures in the directory as consulting ophthalmic surgeon to the local infirmary. No doubt when nurses use ergot or administer chloroform he will use atropine, and forthwith blossom forth as a competent rival to his coadjutor in the department of refraction work.

To anyone who considers this matter from an outsider's point of view it is plain that it is the "free" test which draws. Many patients can ill afford guinea fees and yet would not of their own accord go to hospital if their own doctor would deal with them at, say, a half-guinea fee. Instead of doing so he sends them to the eye hospital or to the optologist if they declare their inability to afford the usual consultant's fees. If at the eye hospital they are handed over to a nurse they probably prefer the sumptuous room of the optologist, who, in spite of the free test, seems to be able to make a good profit out of the glasses he prescribes and sells to them. It really almost seems as if the profession were the culprit to a large extent, and especially the general practitioner.

Seeing that refraction work has to deal in most cases with a deformity rather than a disease of the eye, one does not quite see why the general practitioner should not make himself competent—at least, as competent as the optologist—to take many of these cases in hand. Certain cases, as in other departments of his work, he could send to a specialist. Must he send every case of displacement that requires a pessary to a gynaecologist? The general practitioner could afford to do the work at a half-guinea fee, and that without depriving the ophthalmic specialist of anything. Of course, if the rising young specialist is prepared to do such work at such a fee, the general practitioner would probably prefer to send the cases to him, and a little explanation would probably convince patients of the wisdom of going to him.

Governments in this free country are so apathetic, where only life or limb are concerned, about protecting citizens against themselves or their deceivers, that it is hardly likely the optologist will be restrained. He is more likely to be recognized as a benefactor of the people.

It rests, then, with the profession, both in its own interests and in those of the public, to checkmate unqualified practice, and I believe the general practitioner could, if he cared, successfully do this in this particular matter.—I am, etc.,

March 15th. "G. P."

SIR,—I am very pleased to see the letter by "Specialist," as matters have now reached a point when something should be done. Not very long ago a well-known eye specialist used to see patients at a cutler's shop. A sight-testing optician advertises in the local papers that he works "in co-operation" with a well-known local and London oculist. Moreover, in several districts eye hospitals have appeared which are nothing more or less than an illicit method of advertisement.

Surely taking a house and putting in very large type "Eye Hospital" in front of it does not transform it into a hospital. Recently such institutions have issued reports and published the names of the members of the committee, but there appear no subscribers' list or list of donors, etc., nor are the accounts audited by a chartered accountant. Some of these reports are distinctly amusing and not unfamiliar to some of your readers.—I am, etc.,

March 15th. ANOTHER SPECIALIST.

THE DIAGNOSTIC VALUE OF HUNGER PAIN.

SIR,—In a number of able and interesting articles on the diagnosis and treatment of ulcer of the stomach and duodenum by surgical writers, published in the BRITISH

MEDICAL JOURNAL during the course of the last few months, I notice that it is apt to be assumed that the presence of "hunger pain" is a sign pointing conclusively to the presence of duodenal ulcer. Now I believe this to be an error, for the following reason. The natural history of a case of duodenal ulcer is usually as follows: In early manhood the patient—for he is usually a male—begins to suffer from recurring attacks of dyspepsia characterized by pain in the later period of digestion when the stomach is getting empty (hunger pain). This is the stage of hyperchlorhydria. In the great majority of instances the case does not go further than this, but the attacks gradually cease, and all is well. In a few, however, the attacks of pain become more frequent, and finally almost constant. This is the stage of continuous hypersecretion. Even this may be recovered from with proper treatment, but in a certain number unmistakable signs of duodenal ulcer appear, and the case passes into the hands of a surgeon. The latter then seems to argue thus: "I find in this patient a duodenal ulcer; he gives a history of hunger pain, therefore the presence of hunger pain is always indicative of duodenal ulcer." The fallacy of this method of reasoning does not need to be insisted upon, but is perhaps not surprising in the mouth of one who does not have opportunity of seeing these cases in the early, or functional, stage, for the fact is, I believe, that the formation of a duodenal ulcer is usually only the terminal event in a case of hypersthenic dyspepsia, and the hunger pain is a sign, not of the ulcer, but of the over-production of hydrochloric acid which almost invariably accompanies it.

I know that Mr. Moynihan, for instance, deals rather contemptuously with this view, for in an article which appeared in your issue for November 28th last, he writes:

> It is a very curious feature in connexion with this disease [that is, duodenal ulcer] that perfectly accurate accounts of its symptomatology are given by authors who do not seem to have the remotest conception that the condition they are describing is not, as they suppose, one of "functional" disorder, but one in which a demonstrable organic lesion is present. The vague terms, "hyperchlorhydria," "acid dyspepsia," "nervous dyspepsia," are given very generally as diagnoses; they are too often words without meaning, clinical synonyms for the pathological condition duodenal ulcer.

I feel sure, however, that all experienced practitioners will agree with me that in saying this he goes too far, and that functional hyperchlorhydria has a real existence and is infinitely commoner than duodenal ulcer, and that to advise operation in all patients who exhibit hunger pain would be to exaggerate the domain of operative surgery and would only tend to bring discredit on the surgical treatment of gastric disorders, to which we owe so much and to which Mr. Moynihan himself has made such valuable contributions.

I should not have troubled you with this letter, Sir, were it not that I feel, and no doubt many feel with me, that the time has come to reassert emphatically the conservative view that the great majority of cases of dyspepsia met with in practice are due to functional disorder and not to organic disease, and although for the purpose of this protest I have dealt with only one well-defined symptom it would have been easy, had space permitted, to have selected, from the writings of surgeons, others, the significance of which is just as much and as commonly exaggerated.—I am, etc.,

London, W., March 16th. ROBERT HUTCHISON.

THE COLD-BATH TREATMENT OF TYPHOID.

SIR,—I do not know whether Dr. Manasseh in his letter of February 27th quite sees my point. Since epidemics of typhoid vary so much, the experience of single observers must be fallacious. All who have tried it agree that cold sponging is helpful and relieves many symptoms, but does it really reduce the average death-rate by anything like 7 per cent., as the Brand baths do? This can only be proved by extensive statistics gathered in many places and during outbreaks of varied virulence.

Few things seem better attested in modern medical history than the lowering of typhoid mortality where the bath system was employed in its essentials, but the validity of the proof depended on the great numbers of cases in different places and at different times which yielded the same results. Thus, at Brisbane before the baths were used the deaths amounted to 14.8 per cent. in 1,828 patients; afterwards there were only 7.5 per cent. in 1,902. Drasche in Vienna found his rate fell from 16.2 to 9.3. Osler reported that from 6 to 8 per cent. more lives were saved. In the Prussian army the rate fell from 25 to 8 per cent. Wilson and Salinger had a death-rate of only 7.5 in 1,909 patients thus treated. In short, many thousands of cases showed a mortality less by about 7 per cent. than that of others who were treated just the same except for baths.

I want to see similar statistics for cold sponging and packs. If the seven lives in each hundred are saved by this method, let us by all means adopt it as far easier and simpler. If not, what is the active agent in the bath system which saves life; how can it be applied in a less impracticable way? If the great hospitals where typhoid is treated would give statistics of mortality under cold sponging on a large scale, it would be possible to see where the life-saving element of baths comes in, whether it be the longer continued abstraction of heat or what else. Dr. McCrae, in Osler and McCrae's *System*, vol. i, p. 213, speaking of these substitutes for baths, says:

> They have no marked influence on the general condition, and while they give comfort and are undoubtedly helpful, their effect is in no way to be compared to that which follows hydropathy in the form of baths.

He adds that we are unable to explain this, but that it is clear that baths have a marked effect on the course of the disease, and prevent many complications, and finally that the mortality is less than under any other system. He suggests, indeed, that baths cause a greatly-increased excretion of toxins, besides aiding the circulation and nervous system, and points out definitely that the reduction of temperature is not the main object of the baths.

If these are the views of one party, is there any means of testing them by a collective investigation committee; and, if they are true, what valid substitute for baths can be recommended for use in private and military hospitals in the field, where labour and time are wanting? The question is surely worth testing, since it involves a mortality of 7 per cent. in such large numbers of patients.—I am, etc.,

Clifton, Bristol, March 2nd. G. PARKER.

THE REMEDIAL USE OF ALCOHOL.

SIR,—I have read with much interest the most excellent address on the above subject by Dr. James Macdonald, also Dr. Hill's letter of February 1st. Dr. Hill agrees that an ounce of practice is worth a pound of theory. Certainly Dr. Hill has not had much more than the ounce of practice, for 40 to 50 cases are very few to generalize on, and a great many medical men attend a larger number of cases of lobar pneumonia in twelve months. Dr. Hill surely has not read Dr. Macdonald's address very carefully.

> The medical staff [that is, of the London Temperance Hospital] claim that the results they obtain without alcohol compare favourably with those of other hospitals. Whether that be so or not, the unwisdom of forming a broad generalization from a comparatively limited number of cases is obvious. And, besides, in a disease like pneumonia there are many contributory factors and side elements which have to be taken into consideration.

In spite of this, Dr. Hill mentions his 40 to 50 cases of pneumonia, and presumably generalizes from them. Is Dr. Hill quite certain that no alcohol was administered in any of his cases? It is not very clear what clay soil has to do with the mortality of pneumonia, unless it is that cases of pneumonia do better when the atmosphere is damp; some authorities, I believe, consider pneumonia more fatal when a cold dry east or north-east wind prevails.

It is difficult to comprehend what Dr. Hill means by "paralysing effect on the cardiac nerves." Does he mean that the cardiac muscle is paralysed by the action of alcohol on some nerves connected with the heart? and, if so, which nerves—the cardio-inhibitory fibres of the vagi or the cardiac fibres of the sympathetic, or perhaps the ganglia (and the nerve fibres proceeding from them) in the walls of the heart itself? Dr. Hill writes as if the innervation of the heart and the actions of drugs acting on it, either directly or indirectly, were fully understood.

We will take a case of lobar pneumonia with "over-distension of the right side of the heart, with the small, rapid, feeble, and irregular pulse, the embarrassed

breathing, the facial pallor, and the other symptoms of what has aptly been described as right heart misery;" alcohol is administered and dilatation of superficial blood vessels follows "through the influence of the drug on the vasomotor nerves. In this way the action of the heart is relieved and its efficiency is increased"; the left ventricle is able to contract more fully (because of less peripheral resistance), the left auricle then empties itself more easily, and this in its turn, working back through the lungs, relieves the right ventricle and auricle, and thus lessens the risk of cardiac failure.

There is also the "sedative, benumbing action of which the physician makes use," extremely important in lobar pneumonia. Dr. Hill does not tell us how he procures "*absolute rest*"; perhaps he has also been lucky in having no delirious patients among his 40 to 50 cases of lobar pneumonia as in having no deaths.

Again, there is the disputed stimulating action of alcohol on the cardiac muscle itself, not a "paralysing effect on the cardiac nerves." Also "the widely-admitted fact that alcohol possesses a certain definite value as a food," and "is readily absorbed by the stomach when other nutriment cannot be retained," etc.

The last two paragraphs in Dr. Hill's letter are rather astounding. What could be more dogmatic than ". . . and the cause of the cardiac failure in 99 cases out of 100 is—alcohol"? It is a pity that Dr. Hill did not read through Dr. Macdonald's address more carefully before generalizing from his 40 to 50 cases.—I am, etc.,

L. C. V. HARDWICKE, M.B.,
Assistant Medical Superintendent, Paddington Infirmary, W.

PIGMENT DISAPPEARANCES IN SKIN AND HAIR.

SIR,—In the EPITOME in the BRITISH MEDICAL JOURNAL of February 27th is a review of observations made by Schein upon "pigment disappearances in skin and hair." With his observations I do not agree.

He says that long hairs whiten before short ones, highly pigmented hairs do the same earlier than those of lighter shades, and that hairs whose follicles have produced hairs for longest periods whiten earliest. In the BRITISH MEDICAL JOURNAL of July 4th, 1908, I pointed out that the hair of the beard whitens in the whole of the mental nerve areas before any other part of the beard follows suit; and that sometimes the hair of the beard in the skin of the cervical nerve supply whitens before the mental nerve areas, a very distinct line of demarcation marking the delimitation.

The mental nerve area contains long hairs, short hairs, and hairs of various ages and pigmentary shades; in fact, there is a greater variety of all these kinds of hairs here than in any other region of the beard, and yet they all whiten before longer and more highly pigmented hairs elsewhere in the beard. This could not be so were Schein's observations correct. I also pointed out that some of the shortest as well as the longest hairs of the chin whiten before other parts of the mental nerve areas, and those particular hairs grow in that part of the skin at which the mental nerves become cutaneous.

My criticism of Schein's observations comes to this: that even in the limited state of our knowledge concerning pigmentation, a conception of the appearance or disappearance of pigment is imperfect unless it include the influence of the nervous system.—I am, etc,

London, W., March 10th. G. LENTHAL CHEATLE.

APPENDICITIS AND RHEUMATISM.

SIR,—In connexion with the question of rheumatic appendicitis recently raised by Dr. Eustace Smith I think the following case very suggestive:

A lady, aged 40, for the last year has at every menstrual period had some manifestation of rheumatism, generally taking the form of a swollen and painful joint. In August, 1908, she had what appeared to be a definite and typical attack of appendicitis, though, as it occurred at the time of a period, there was a doubt whether it might be due to ovarian trouble. A few weeks ago, again at the time of a period, the patient had a second attack, which began with vomiting, fever (102°), and general abdominal pain and tenderness, which after a few hours settled down to the right iliac region, with its maximum intensity over the appendix. Associated with this were painful joints, severe intercostal rheumatism, and a stiff neck. This led to my trying sodium salicylate, with the result that the appendicular symptoms, though they had promised to be more severe than in the first attack, cleared up with remarkable rapidity.

The question of rheumatic appendicitis seems to me of considerable practical importance, for, as far as my experience goes, sodium salicylate is not often given for appendicitis; indeed, in these cases the modern physician is for the most part content with watching for the right moment at which to call in his surgical colleague. Provided he does not allow its use to drug his vigilance, he might, perhaps, with benefit in the future more often combine sodium salicylate with his watching.—I am, etc.,

Shanklin, I.W. J. A. B. HAMMOND.

DISEASES MODIFIED BY CLIMATE.

SIR,—Your reviewer of Dr. Stoddart's book on Psychology, in the JOURNAL of March 6th, quotes the passage as to the rarity of general paralysis of the insane following syphilis in the East—India, China, Japan, etc.—when compared with European countries, and though not actually doubting this, seems at a loss for an explanation.

I have no doubt as to the accuracy of the observation, and have long held the following as the reason: In hot climes, the skin being more active is more liable to disease, just as kidney troubles are more frequent in colder zones, these two systems being complemental to a certain extent.

The virus of syphilis has a special affinity for the epiblast from which both the nervous system and the skin are developed, and it is notorious that when this disease is accompanied by a good skin rash, the victim is much less likely to suffer from locomotor ataxy or general paralysis of the insane in the future. This is exactly what happens in the East, on account of the greater susceptibility of the skin to disease, and the nerve centres escape.

The conditions and strain of life are of less moment in the East, whereas the struggle for existence in the West, being more acute, might be a factor in making the nervous system more prone to the disease. Of course this only applies to natives, and not to Colonials.—I am, etc.,

THOMAS JOHNSTONE, M.D., M.R.C.P.

Leeds, March 15th.

RURAL NURSING ASSOCIATIONS.

SIR,—In the BRITISH MEDICAL JOURNAL of March 13th, p. 694, Dr. Wm. Milligan calls attention to rural nursing associations. The Midwives Act has so frightened the women in country villages, not one of them dare help their sisters in distress. The excellent women, who were wonderfully clean, kind, and motherly, who would stay for nights and days with a woman in labour, nursing her, feeding her, and looking after the wants of the husband and his children, are now warned, threatened, and replaced by young unmarried nurses whose questionable knowledge of the efficient use of antiseptics and cleanliness is counterbalanced by their lack of motherly experience and the art of feeding and managing a baby. Alas! the splendid spirit among village women to help one another is being crushed out by this Midwives Act.

Dr. Milligan has in no way exaggerated the situation, for practically all that he has said applies to my district; the nurse is often driven upon her rounds from village to village in a smart dogcart, she visits every possible case, making friendly calls of inquiry, diagnosing and treating whatever case she may be called in to, and my patients are attended by her frequently without my knowledge and directions. The committee of ladies are anxious to make both ends meet, and touting for patients to pay subscriptions to the association is keen. One of the ladies once accidentally told me that "their nurse was as good as any doctor." I have been threatened with all sorts of penalties and disgrace if I do not rush off to the help of this nurse whenever summoned; but as she practises medicine and minor surgery, it is a question whether I may not render myself answerable to the General Medical Council for covering an unqualified practitioner.

The Midwives Act has introduced a class of practitioners who are proving disastrous to the public health and to the qualified medical practitioner.—I am, etc.,

March 15th. PARISH DOCTOR.

THE MENTALLY DEFECTIVE IN PRISON.

SIR,—In the issue of the BRITISH MEDICAL JOURNAL of November 14th, 1908, Dr. Champneys replies to my letter on the above subject, which appeared in the number of October 17th.

Dr. Champneys takes exception to my having denied more than he asserted. If I erred in that respect, I ask him to accept my apology; but I was not aware that I had denied anything. I made statements which I will now substantiate. Dr. Champneys declines to accept my statements, but whether he objects to them *en bloc* or only in part does not appear. I observe that Dr. Champneys does not bring forward one tittle of evidence in refutation of my assertions. He does not even state whence he derived the "facts authoritatively published" that more than ever confirm him in his opinion. He quotes an opinion of the Duke of Wellington, but even the Duke had his limitations, and the opinion of a person, however eminent, on a subject he has had no experience of must be largely discounted.

With your permission, I will quote some figures from the Official New Zealand *Year Book* for 1908 in support of the statements made in my former letter. I stated:

I. "That from being, perhaps, the most drunken, New Zealand had become one of the most sober countries inhabited by the English-speaking race." I will quote the amount of alcoholic liquor consumed by the people of New Zealand (excluding Maories), the other Australasian colonies, and the United Kingdom:

Consumption of Spirits, Wine, and Beer per head of the Population for the Years 1901–6 (p. 233, Official New Zealand Year Book, 1908).

	Spirits.	Wine.	Beer.
	Gallons.	Gallons.	Gallons.
New Zealand	0.755	0.144	9.389
New South Wales	0.81	0.57	9.76
Victoria	0.70	0.85	12.04
Queensland	0.82	0.29	10.38
South Australia...	0.40	2.53	8.17
Western Australia	1.49	1.08	24.74
Tasmania	0.53	0.17	9.15

The average annual consumption in the United Kingdom, 1901–5, was spirits, 1 gallon per head; beer, 29½ gallons per head; wine, ¼ gallon per head.

It will be observed that our drink bill is lower than in any of the places mentioned with the exception of Tasmania and perhaps South Australia. The latter colony consumes much more wine but less beer and spirits. The wine is chiefly light and of local manufacture, so it is probable that the South Australians consume less alcohol than we do in New Zealand. Again, on page 232 I find further testimony of the sobriety of the Maorilander proper:

Among the New Zealand population of European descent there is evidence of less drunkenness than among people who have come from abroad. At the census of 1906, out of a total population of New Zealand over 15 years of age, 55.75 per cent. were found to have been born here; while the proportion of convictions for drunkenness of New Zealand-born Europeans to the total convictions was in the year 1906 about 20 only.

II. "That crime, especially of a serious nature, had decreased under our system of education, the decrease being most marked amongst those who had been educated in our State schools." On pages 237 and 238:

The New Zealand-born formed at the last census 68 per cent. of the whole population; they contributed only 33 per cent. of the prisoners received in gaol. Of the New Zealand population, however, a large number are under 15 years of age, a period of life at which there are very few prisoners; and therefore another comparison is necessary. It is found that New Zealand-born over 15 years of age formed 56 per cent. of the total population above that age; but, as before stated, New Zealanders constituted only 33 per cent. of the total number received in gaols.

I will here remark that if the adult population who had passed through our State schools were winnowed out from those brought up in the Colony and educated in some of the other schools, the effects of our education system would show better results, both as to sobriety and criminality.

III. "That illegitimacy is gratifyingly small."

Average of annual proportion of illegitimate births in every 100 births for ten years ending 1907 in New Zealand, Tasmania, and New South Wales (p. 249): New Zealand, 4.52; Tasmania, 5.65; New South Wales, 7.01.

The proportion of illegitimate births per 1,000 unmarried women, that is, spinsters and widows, at the reproductive ages, covering a period of twenty years, is shown to be:

Year.	Unmarried Women aged 15 to 45 Years.	Illegitimate Births.	Illegitimate Birth-rate per 1,000 Unmarried Women.
1886	56,277	602	10.70
1891	68,990	638	9.25
1896	89,722	834	9.30
1901	105,420	937	8.89
1906	116,506	1,132	9.72

I would point out that 1877 was the commencement of our education system, and that it would not have borne much fruit by 1886, and that in the next quinquennial period there was a substantial drop, which has been fairly well maintained. On p. 250 I find, *inter alia*, that the rate in New South Wales for 1905 was 16.24 per 1,000 unmarried women.

Both Tasmania and New South Wales have religious instruction in the State schools, that of the latter being denominational.

I could quote other figures which would all support the truth of my assertions, but I must regard your "scruples."

I regret that I am not able to withdraw my statement—"It is unfortunate that so many persons holding positions that should entitle their opinions to weight, argue on facts as they imagine them to be instead of as they are." It is quite evident that if Dr. Champneys did not imagine his facts he must have accepted them from some one who did.—I am, etc.,

Hastings, New Zealand, Jan. 1st. FRED. DE LISLE,
Member British Medical Association.

TREATMENT OF SCHOOL CHILDREN.

SIR,—Although there have been repeated communications, discussions, and suggestions as to the most satisfactory mode of carrying out the necessary treatment of school children found on examination to be defective, the difficulty seems to have been to discover a means to compel parents and custodians to pay attention to the report of the school medical officer.

The Eccles Council has recently had recourse to the Prevention of Cruelty to Children Act, 1904, which does not sufficiently meet the case.

No notice, however, seems to have been taken of the following paragraphs of Clause 12 of the Children's Charter, which, as the Children Act, 1908, comes into force on April 1st next:

12. *Punishment for Cruelty to Children and Young Persons.*—(1) If any person over the age of sixteen years, who has the custody, charge, or care of any child or young person, wilfully assaults, ill-treats, *neglects*, abandons, or exposes such child or young person, or causes or procures such child or young person to be assaulted, ill-treated, neglected, abandoned, or exposed, *in a manner likely to cause such child or young person unnecessary suffering or injury to his health* (including injury to or loss of sight, or hearing, or limb, or organ of the body, and any mental derangement), that person shall be guilty of a misdemeanour, and shall be liable—

(*a*) on conviction on indictment, to a fine not exceeding one hundred pounds, or alternatively, or in default of payment of such fine, or in addition thereto, to imprisonment with or without hard labour, for any term not exceeding two years; and

(*b*) on summary conviction to a fine not exceeding twenty-five pounds, or alternatively, or in default of payment of such fine, or in addition thereto, to imprisonment, with or without hard labour, for any term not exceeding six months;

and for the purposes of this section a parent or other person legally liable to maintain a child or young person *shall be deemed to have neglected him in a manner likely to cause injury to his health if he fails to provide adequate* food, clothing, *medical aid*, or lodging for the child or young person, or if, being unable otherwise to provide such food, clothing,

medical aid or lodging, he fails to take steps to procure the same to be provided under the Acts relating to the relief of the poor.

(2) A person may be convicted of an offence under this section, either on indictment or by a court of summary jurisdiction, notwithstanding that actual suffering or injury to health, or the likelihood of such suffering or injury to health, as obviated by the action of another person.

(3) A person may be convicted of an offence under this section, either on indictment or by a court of summary jurisdiction, notwithstanding the death of the child or young person in respect of whom the offence is committed.

(The italics are mine.)

It will be seen that defaulting parents and custodians will receive at an early date most drastic treatment at the hands of the State if they continue to neglect children and young persons committed to their charge. The intention of the Act seems to be, in the first instance, to throw the onus of providing for medical treatment on the parents and custodians and not on the State.

It is also instructive, as bearing on hospital reform and the questionable need to build any but cottage hospitals in the future, to note that by this Act parents and custodians unable to meet, by insurance or otherwise, the just fees of medical practitioners are expected to claim the use of the infirmaries at present under the control of boards of guardians. This procedure will in time compel these buildings, taken over by borough or county councils, to be properly staffed and organized, and once again to take their rightful position in the economy of the State. It is quite time that voluntarily subsidized hospitals ceased, on the one hand, to bear State burdens, and, on the other, to deprive registered medical practitioners of their legitimate livelihood by underselling.—I am, etc.,

London, S.W., March 13th. E. ROWLAND FOTHERGILL.

A MEDICAL DEGREE FOR LONDON STUDENTS.

SIR,—In fruitless arguments over the quality of various degrees and diplomas I have repeatedly seen statements and implications such as Dr. Mercier makes under the above heading in your last issue. He says:

> The substitution of three professional examinations for the two in the present curriculum before the Conjoint examinee can obtain his diploma is a handicap to the London medical student in comparison with the alumni of other universities. The grievance of the London medical student is that for the same expenditure of time, labour, and money for which a provincial student can obtain a university degree, the London student can obtain the Conjoint diplomas only, which, although well known in the profession to represent professional attainments equivalent to a university degree, are not so regarded outside the profession.

I beg to say that the implication he makes here does not apply to the Scottish universities, and if he says it does, he speaks in ignorance, or quite in face of the facts. For the past twenty-five years at least (I speak from personal knowledge, and of Glasgow University specifically) the Scottish universities have demanded *four* professional examinations from their graduates in place of *three* (not two, as Dr. Mercier says) required by the English Conjoint Board.

As regards time and labour they are nearly the same in the preliminary scientific subjects and in those of the second examination, save that at the University separate courses of zoology and botany take the place of one in biology, and that there have to be nine months spent at physiology and histology instead of six. In the more strictly professional subjects the University requires six months' systematic materia medica and therapeutics and six months' midwifery instead of three months in each of these subjects. Pathology gets six months' systematic study and three months' practical pathology and bacteriology, as against a combined three months' course required by the Conjoint Board. Diseases of women have three months' study (twenty-five lectures or clinical meetings) instead of a course of twelve meetings. At the University three years' hospital work are obligatory, but only two are required by the Conjoint Board. It may be said that few Conjoint men are satisfied with the minimum course of study, and the same is true of the University graduate. There the men do twice or three times the amount of anatomy obligatory, double the systematic medicine and surgery, and generally they spend four years at the hospitals instead of the three absolutely necessary.

Coming to the quality of the examinations, opinions very well may, and, indeed, always will, differ; but, taking the fact that from 35 per cent. to 55 per cent. of the candidates are regularly rejected, the standard at the University can be no mean one. This will be granted by the most biassed, as, in view of Scottish educational history, he will hardly attribute an essential want of brain to the North. If the course of study required and the examinations of the London University are no obstacle in the way of the Conjoint men, as Dr. Mercier says, then they are in a better position for acquiring a degree than are the Scottish students, inasmuch as their course of study may be pursued at any one or more of a large number of educational institutions, whereas the Scottish University man is compelled to study at least two years at the University.

I have only glanced at the requirements of the English provincial universities, and my impression is that their standard is much the same as the Scottish; but I shall leave the graduates of those universities to vindicate the status each of his own Alma Mater.

Let me assure Dr. Mercier that the general public "fashes" itself very little about our degrees and titles, the chief concern being to secure as much as possible from us for as little reward, in our senseless competition for clubs and underselling of each other in private work, as we, graduates and diplomates alike, are foolish enough to accept. It would serve us better to spend our energies in remedying these tangible matters than in the pursuit of vain degrees and phylacteries. Of the small public who take an interest in the different titles and qualifications, the well-informed appreciate each at its proper value. The ill-informed estimate a man's position by the number of letters he can append to his name, and, as the diplomate has more of the alphabet to play with than has the graduate, he is at no disadvantage in this respect.

Personally I have no objection to any body of men earning, begging, borrowing, stealing, or inventing for themselves whatsoever degrees or titles they may fancy; but, whilst they do so, I certainly deprecate all unwarrantable aspersion of other respectable corporations and their graduates.—I am, etc.,

Hull, March 16th. JOHN DIVINE, M.D.Glasg.

SOUTHWOLD LIBEL CASE.

IN order to remove certain misunderstandings that seem to have arisen, we are requested to draw attention to the exact words of the paragraph in which the opening of a fund on behalf of the defendants in this case was made known in the JOURNAL of February 6th, p. 353:

"*Upon the suggestion of local members of the profession** who desire to give practical expression to their sympathy with Drs. Mullock and Tripp, of Southwold, a fund has been opened to assist them in defraying the heavy expenses which they have incurred as the result of the recent action which they were called upon to defend."

* The italics were not in the original.

By a printer's error, the date of Dr. Smith's letter published last week was printed February instead of March 6th.

Universities and Colleges.

UNIVERSITY OF LONDON.

MEETING OF THE SENATE.

A MEETING of the Senate was held on February 24th.

Appointment of a Royal Commission.

Attention was drawn to the announcement which had appeared in the press that a Royal Commission had been appointed to inquire into the subject of university education in London. It was reported "that the reference to the Commission had not been submitted or communicated to the University, and that the Government had, prior to the publication of the announcement, been informed that it should not be assumed, without opportunity for consultation, that the Senate would be an assenting party to any reference to a Commission in excess of, or inconsistent with, the resolution on the subject passed by them on December 2nd last."

D.Sc. Examination in Physiology.

The degree of Doctor of Science in Physiology has been conferred upon Dr. Frederick Hughes Scott, the subject of his

thesis being the relative parts played by nervous and chemical factors in the regulation of respiration. It was reported that, in addition, Dr. Scott had submitted other contributions to the advancement of science.

Laboratory of National Eugenics.

Mr. David Heron, M.A., and Miss E. M. Elderton were reappointed Research Fellow and Research Scholar in the Francis Galton Laboratory for National Eugenics for a further period of one year.

Grant from the Goldsmiths' Company.

A communication was received from the clerk of the Goldsmiths' Company intimating the renewal for a further period of three years of the Company's annual grant of £5,000 towards the maintenance of the Goldsmiths' College, New Cross. The cordial thanks of the Senate were accorded to the Company for their continued generosity.

Dates of Examinations for Medical Degrees.

It was resolved that in 1910 the second examination for medical degrees, Part II, should be held on the second Monday in March, and that the second examination for medical degrees, Part I, be held on the Thursday following the second Monday in March.

The B.Sc. (Pass and Honours) Examination in Physiology for External Students.

The Senate has resolved that in and after 1910 certain emendations should be introduced in the regulations for the B.Sc. (pass and honours) examination in physiology for external students (Blue Book, September, 1908, pp. 298-310).

Portraits of Former Vice-Chancellors.

The portraits of the following former Vice-Chancellors have been presented to the University, and have been framed and hung in the Vice-Chancellor's room: Sir John W. Lubbock, Sir John Shaw-Lefevre, Sir Edward Ryan, Sir George Jessel, Sir Julian Goldsmid, Sir John Lubbock (now Lord Avebury), Sir James Paget, Sir Henry Roscoe, Dr. A. Robertson (now Bishop of Exeter), and Dr. P. H. Pye-Smith.

Election of Representative.

Dr. Frederick Taylor has been appointed representative of the University on the General Medical Council in the place of Dr. P. H. Pye-Smith, resigned.

University Studentship in Physiology.

A university studentship in physiology of the value of £50 for one year will be awarded to a student qualified to undertake research in physiology. Candidates must be matriculated students or graduates of the University. Applications to be sent to the Principal by May 31st, 1909, from whom further particulars can be obtained.

EXTRAORDINARY MEETING OF THE SENATE.

An extraordinary meeting of the Senate was held on March 3rd, summoned by the Vice-Chancellor upon a requisition signed by six members, to consider the announcement which had appeared in the press regarding the appointment of a Royal Commission on the University, and to decide what action, if any, should be taken on behalf of the University. Eventually the Senate resolved to meet as a committee to consider the matter further on March 31st.

UNIVERSITY OF ABERDEEN.

UNIVERSITY COURT.

A MEETING of the Aberdeen University Court was held in Marischal College on March 9th, Professor Matthew Hay presiding, the Principal being still indisposed.

It was announced that Dr. William Dey, late rector of the old Aberdeen Grammar School and at present a member of the Court, had intimated to the secretary the intention of himself and his brothers to found a scholarship, of the annual value of £100, in memory of their father, to be called the "James Dey Scholarship in Education." Intimation was received that the committee in charge of the movement to erect a memorial to the late Professor George Pirie proposed that, subject to the sanction of the University authorities, the memorial should take the form of a stained-glass window in the antechapel of King's College Chapel. The Court, as well as the Senatus, approved of the proposal, subject to the designs and plans being afterwards approved.

Gift to the Natural History Department.

Mr. R. Hay Fenton (London) has offered to the University, on certain reasonable conditions, his very fine collection of British birds' eggs. Four years ago Mr. Fenton lent the bulk of his collection to the Natural History Museum, Marischal College, and it has been of great interest and value to students and others. The collection numbers upwards of 7,000 specimens, and includes, as its greatest rarity, an egg of the extinct great auk. Mr. Fenton, in his letter intimating the gift, said: "In making this offer to the University of my native city, let me express the hope that it may be the means of stimulating Aberdonians at home and abroad, and especially graduates, to take an interest in and contribute specimens to the Natural History Museum, where, as a boy, I spent many a profitable and pleasant Saturday afternoon in the company of my father." The Court received the intimation with much satisfaction, and resolved to express its very cordial thanks to Mr. Hay Fenton for his most generous gift.

Resignation of Professor Ogston.

The following letter was received from Professor Ogston by the Secretary of the Court:

"As I feel that it would be in the interest of the University that its department of surgery should now be in the hands of a younger man than I am, I beg that you will submit to the University Court my regret that they will, under the provisions applicable to those professors who have attained the age of sixty-five years, be pleased to sanction my resignation of the chair of surgery, to take effect from the end of the present University year, by which time I shall have completed my sixty-fifth year and shall have held the chair of surgery for twenty-seven years. My object in thus early proffering my request is to ensure that my successor may have ample time to arrange his plans of teaching and be able to commence his duties at the beginning of the winter session 1909-1910."

This letter confirms the statement which Professor Ogston made to his class at the opening of the session in October. It is understood that among the candidates for the vacant post are Mr. J. Scott Riddell, M.V.O., M.A., M.B., Senior Surgeon, Aberdeen Royal Infirmary; Mr. John Marnoch, M.A., M.B., Surgeon, Aberdeen Royal Infirmary; Mr. H. M. W. Gray, M.B., F.R.C.S., Surgeon, Aberdeen Royal Infirmary (all three are lecturers in clinical surgery to the University), and Mr. Alex. Don, M.A., M.B., F.R.C.S., Surgeon to the Dundee Royal Infirmary.

UNIVERSITY OF DUBLIN.

THE following candidates have been approved at the examination indicated:

FINAL (*Part II*).—*D. M. Moffatt, *A. J. Stals, J. D. Kernan, H. R. Kenny, F. R. Sayers, C. G. S. Baronsfeather, D. J. Stokes, C. B. Jones.

* Passed on high marks.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.

MEETING OF COUNCIL.

AT a meeting of Council on March 11th, Mr. Henry Morris, President, in the chair, Mr. F. Richardson Cross was appointed Bradshaw Lecturer for the year, and the Sir Gilbert Blane medals were awarded to Staff Surgeon Charles Rowley Nicholson, H.M.S. *Egmont*, 1906-7, and Staff Surgeon Arthur William Bligh Livesay, M.B., H.M.S. *Bonaventure*, 1907.

His Excellency Dr. Nicolas Weliaminoff, Privy Councillor of State and Professor of Surgery at the Imperial Military Academy of Medicine, St. Petersburg, who was elected an Honorary Fellow of the College in 1901, was introduced and signed the Roll.

The Admission of Women to the College.

The following proposed by-law was accepted, but again referred to the Committee by which it was drawn up, for further consideration:

1. Pursuant to the powers conferred by the Medical Act, 1876, and subject to the provisions therein and hereinafter contained, women may be admitted as Members and Fellows of the College and may obtain Diplomas in Dental Surgery on the same terms and conditions as men; and so far as it is necessary to give effect to this By-law words in the By-laws and Regulations of the College which import the masculine gender shall also import the feminine gender, and all proper alterations shall be made in the form of the Letters Testimonial, Diplomas, Certificates and Licences granted by the College.
2. Women shall not be eligible as Members of the Council or vote at or take any part in any election of a Member or Members of the Council, or attend any Meeting of Fellows or of Fellows and Members (except Meetings convened for the delivery of Lectures or Orations), or otherwise take any part in the government, management, or proceedings of the College.
3. Women shall not be eligible as Members of the Court of Examiners or for any Examinership to which the Council appoint.

Election of Representative.

Mr Henry Morris was re-elected for a period of five years as the Representative of the College on the General Medical Council.

The May Examination.

Mr. William Wright was appointed Substitute Examiner for the May examination, in place of Professor Young, whose resignation was accepted with regret.

The Charter of the British Medical Association.

A committee was appointed to consider the petition of the British Medical Association for the grant of a Charter of Incorporation.

The Services.

ARMY ESTIMATES.—MEDICAL SERVICES.

Classification of Cases.

COLONEL E. B. HARTLEY (retired), of Ilminster, Somerset (late P.M.O. Cape Colonial Forces), writes: One cannot help feeling glad to see in your issue of March 6th that the admissions to hospital of the regular army have been considerably reduced by "an administrative improvement by which men with slight ailments are not removed to hospital, but are treated in barracks as out-patients" (I am quoting Mr. Haldane's sentence). I have always been surprised that this system was not followed years ago, for undoubtedly in times gone by thousands of soldiers have been admitted into military hospitals who would only have been treated by civil hospitals as out-patients.

During my twenty-six years' service in the regular forces of the Cape Colony the Daily Sick have been marched to the hospital and the medical officers have classified them as follows: "Hospital," "No duty," "Medicine and duty." The "No duty" men lived in the barrack-rooms, and were excused parades, guards, drills, sentry duty, and fatigues. They were not allowed to enter the canteen, nor to walk beyond the precincts of the barracks. These cases would be lesser ailments, minor fractures of the upper extremities, contusions, certain stages of venereal disease (of course not all) and trivial complaints generally. It was found that much expense and trouble to all concerned was saved in this way. The patients got well quite as quickly when out of hospital as in, and the hospitals were not crowded with a lot of idle listless men, a weariness to themselves and a bother to everybody else.

Many commanding officers, I know, will say a man must be doing his duty or be in hospital, and that they do not want a lot of idle men loafing about the barracks and cantonments, a bad example to their comrades and a blot upon the normal smartness of a station, etc. Such ideas are very excellent, but they will not help the British taxpayer, nor will they keep the hospitals empty.

The other classifications "Hospital," "Medicine and duty," explain themselves.

I venture to submit that some such plan as I have endeavoured to explain might be considered for adoption in H.M. Imperial Army.

THE ROYAL NAVY MEDICAL SERVICE.

General Expenditure.

THE First Lord of the Admiralty issued with the navy estimates for 1909-10, published on March 12th, an explanatory statement. The total expenditure is this year estimated at £35,142,700. The estimate for the medical services, including the cost of medical establishments at home and abroad, amounts to £258,700.

The Committee on the Medical Service.

The statement contains the following paragraph:

"The recruiting of the Naval Medical Service has for some time been a matter of anxiety to successive Boards of Admiralty. I have now appointed a Committee to inquire into the naval medical service, composed as follows:

Admiral Sir John Durnford, K.C.B., D.S.O. (Chairman).
Inspector-General James Porter, C.B., M.D., M.A. (Medical Director-General).
Surgeon-General Sir Alfred Keogh, K.C.B., M.D.
Mr. J. H. Brooks, Principal Clerk.
Sir William W. Cheyne, Bart., C.B.
Deputy Inspector-General William H. Norman, R.N.
Mr. G. L. Cheatle, C.B., F.R.C.S.
Mr. J. S. Barnes, Admiralty, Secretary.

We hope, with the able assistance of these gentlemen, that we shall devise some means of putting the Naval Medical Service upon a more satisfactory footing."

ROYAL ARMY MEDICAL CORPS (TERRITORIAL).

Aberdeen.

THE paragraph published in the issue of March 6th referring to the position of the training school of the Highland Division was apparently open to misconstruction, and gave rise to a wrong impression of the state of training of the corps in Aberdeen. It was not intended to convey the idea that little practical work had been done in connexion with the field ambulances, as this would have been very contrary to the actual state of affairs. Instructional classes have been held in a wide range of subjects, and a much larger amount of work has been done in this regard than was ever accomplished under the old volunteer system. With regard to the finance of the training school, certain developments have quite recently taken place and certain grants have now been received for the school. Before these grants were made the work was being carried on from the funds of the field ambulances, so that the actual training of the corps has not suffered in any way.

Second London Division.

The organization of the field ambulances of the Division is practically complete. No. 6 Field Ambulance was recognized last week, and there are now enlisted 7 officers and 209 men. Both Nos. 4 and 5 Field Ambulances are seven or eight above strength.

Of the General Hospitals No. 4 is recognized; in addition to the staff *à la suite* which is complete, it has 3 officers and 26 men, 17 additional men being required to complete it.

Field Ambulances.

LIEUTENANT-COLONEL J. H. STACY, Officer Commanding 2nd East Anglian Field Ambulance (Norwich), writes: I see the 3rd South Midland and the 3rd Northumbrian Field Ambulances are claiming to be the first of these fresh units up to full strength. I may say that the 2nd East Anglian Field Ambulance was full up at the beginning of the year except for one officer and one sergeant compounder. I think that their popularity is due to the schools of instruction from the regular army making the recruit feel that on joining he is getting an education in itself.

Medico-Legal.

THE RESPONSIBILITIES OF MAGISTRATES.

MEMBERS are probably more or less familiar with the case in which Dr. Hodgson of Crewe was made defendant for certain remarks with which, as Chairman of the local Bench, he announced its decision in certain cases before it with regard to the nature of the agreements as to some public-houses at Crewe. In announcing the decision of the Bench, Dr. Hodgson stated that the then opinion of the Bench was that Messrs. Walker had misled the magistrates. Messrs. Walker commenced an action against Dr. Hodgson claiming £10,000 damages. Mr. Justice Ridley ruled that there was no absolute privilege, and the matter was arranged, Messrs. Walker offering to admit that Dr. Hodgson's comments were made bona fide if he, on his part, would publicly state what he had really already admitted, namely, that his remarks, in view of the facts which subsequently came to his knowledge, were not justified. Dr. Hodgson is an ex-mayor of Crewe, a member and Vice-Chairman of the Cheshire County Council, and Chairman of the Education Committee. The following appeal has been issued, signed by, among others, the Right Hon. Sir John Brunner, Bart., M.P., Mr. W. H. Lever, M.P., Mr. James Tomkinson, M.P., Mr. W. J. Crossley, M.P., Mr. A. J. King, M.P., and the Hon. A. Lyulph Stanley, M.P:

> We feel confident that there are many who will be glad to join in relieving Dr. Hodgson of the heavy costs for which he has become liable in his defence of the action brought against him by Messrs. Walker.
>
> A great burden has been cast on Dr. Hodgson through the discharge of his public duties as a magistrate, and by his fight on a point which is of great public interest—namely, whether magistrates have an absolute privilege when sitting as members of a Licensing Committee.
>
> It would be a fitting recognition of Dr. Hodgson's long, varied, and unsparing services to Cheshire, and of the esteem in which he is held, that he should be relieved from a personal responsibility which he has incurred from his action in a public and representative capacity.
>
> The total amount of Dr. Hodgson's costs in the case will probably amount to £4,000. Subscriptions will be received by Alderman McNeill, Herdman Street, Crewe (the honorary treasurer of the fund); and by Alderman C. H. Pedley, C.C., Westminster Buildings, Crewe (the honorary secretary); or they may be paid to the credit of the Dr. Hodgson Testimonial Fund, Parr's Bank, Crewe.

CONTRACT PRACTICE.

A CASE of considerable interest to medical men engaged in contract practice was recently decided in the Cheltenham County Court.

The plaintiff was the medical officer to a friendly society, and he sought to recover fees from a member of the society for setting a fractured clavicle and after-attendance. The plaintiff admitted having examined the defendant some years previously and certifying him as a fit person to become a member of the society, but he based his claim on the facts that he had no information as to whether defendant had in fact become a member, that defendant had omitted to produce his card of membership, as plaintiff contended he was bound to do, and that his payments were in arrears. For the defence it was denied that defendant was in arrears, and it was contended that there was no obligation on him to produce his card.

Judge Ellicott held that the question of a member being in arrears or not was not a question for the surgeon, but as the rules of the society imposed certain duties on the surgeon, there was a correlative duty on the members to prove their title to his services. This the defendant had not done, and he accordingly gave judgement for the plaintiff with costs on the A scale, as the case was one that concerned a large number of people. The medical man concerned is to be congratulated on the result of the case and on his determination in fighting it.

CORONERS AND NECROPSIES.

A COLONIAL correspondent, who signs "Witness," asks: Is it in accordance with British usage and custom that a medical coroner should attend and witness the *post-mortem* examination he has directed to be made preparatory to an inquest, and that he should remark upon and discuss the pathological findings during the conduct of the necropsy?

*** We are pleased to say that conduct described by our correspondent is not usual with coroners in England, and we think that, as he has afterwards to preside over the jury, who with himself deliberate on the case in question, it would be wiser and more judicial if he brought his mind to bear upon the sworn evidence given before the court unprejudiced by observations he may have made at the *post-mortem* examination. We further are of opinion that, having issued his order for a *post-mortem* examination to be made, he should rely upon the report given in evidence at the inquest by the operator, and not present himself at the necropsy, as on the occasion in question.

FEES FOR MEDICAL EVIDENCE.

A CHESHIRE SURGEON writes that he has been subpoenaed to give evidence as to the testamentary capacity of a deceased

patient, and asks the following questions: (1) Is he at liberty to charge any fee he likes, with travelling expenses? (2) Or is he compelled to accept the statutory fees and allowances? (3) Can he claim from the solicitors in the case fees for consultations, letters, etc.? (4) Is his evidence regarded as expert evidence or merely evidence as to facts?

(1) Yes; but, unless he gets a written promise to pay from the party who subpoenaes him, he will be unable to recover more than the legal allowance. (2) In the absence of any binding agreement to pay more, he must accept the legal allowance. (3) He should stipulate for these expenses beforehand, otherwise he might have a difficulty in recovering them. (4) No, it is ordinary professional evidence. Expert evidence is properly that given by an outside witness who has nothing to do with the case personally.

Medico-Ethical.

The advice given in this column for the assistance of members is based on medico-ethical principles generally recognized by the profession, but must not be taken as representing direct findings of the Central Ethical Committee.

CIRCULARS TO PATIENTS.

X. X.—There can be no objection to the terms of the circular proposed, and no criticism is likely to arise so long as it is sent only to persons who are actually the patients of the firm.

CIRCULARS TO THE PROFESSION.

R. N. D. B.—We can see no objection to our correspondent sending such a circular to the medical men in his neighbourhood, but would suggest that references and not testimonials should be enclosed.

CONTRACTS NOT TO PRACTISE.

M. W. W. had better consult a solicitor, as everything depends on the exact terms of the bond. In all probability the contract is valid, but courts take into consideration the reasonableness of restrictions.

A QUESTION OF FEES.

Hard Hit.—Would it not be better to write a friendly letter asking for particulars, as no memorandum appears to have been kept of the number of visits? If this were known, the amount might be estimated, and we do not think the fees should exceed the rate of three visits for a guinea. Of course, the out-of-pocket expenses would have to be paid in addition, but many public authorities report on diphtheria swabs and supply antidiphtherial serum without charge.

A NEW FORM OF ADVERTISEMENT.

No Advertisements complains that he has been worried by a representative of the "Court Something-or-other," who is collecting information from medical practitioners for a work which he says is "read by laymen."

*** We sympathize with our correspondent, but fear that all he can do is to close his doors, as far as possible, against impudent canvassers.

A DISCLAIMER.

Dr. Arthur S. Morley (London, W.C.) writes: I have recently written certain articles on the medical aspects of accident insurance for the *Accident Year Book*. I regret to see that in their advertisements of the book in certain insurance journals the publishers have advertised my name and mentioned my connexion with a large insurance company. They have done this without my knowledge or consent, and I should be greatly indebted to you if you would publish this letter in order to free me from the suspicion of being a party to what might be regarded as a very objectional form of advertisement of myself.

MEDICAL ADVERTISING.

With reference to the paragraph under this heading, published in the Journal of January 9th, we are informed by the practitioner concerned that as soon as he became aware that the poster and handbill had been issued he took effectual steps to prevent their further circulation, and as this fact was known to the secretary of the local Branch he complains that any notice should be taken of it in the Journal. We are glad to know that the advertisements were issued without the consent of the practitioner concerned, but we would point out that in the case to which we referred the same plea was put forward. Ignorance on the part of the practitioner cannot absolve him from responsibility, as this would open the door to unlimited advertisements by club authorities. The officials of the society should know that they risk its existence, in so far as it is dependent upon the services of a registered medical practitioner, if they issue advertisements of the kind sent to us.

Public Health
AND
POOR-LAW MEDICAL SERVICES.

POOR LAW MEDICAL OFFICERS' ASSOCIATION OF ENGLAND AND WALES.

A council meeting of this association was held at 9, Copthall Avenue, E.C., on March 11th, Dr. D. B. Baiding being in the chair.

Dismissal of Medical Superintendent.—The honorary secretary reported that the Local Government Board had asked to be allowed to send the memorial and papers of the dismissed medical superintendent, whose case was considered at the last meeting (British Medical Journal, February 20th, p. 509), to the board of guardians. After obtaining that gentleman's consent the request had been acceded to.

Audit of Guardians' Accounts.—In the case of Brand and the Driffield Guardians (see report of last meeting) the association had been represented by Mr. Jennings before the Local Government Board auditor, and the latter had surcharged the guardians £13 18s. 11d. It was likely that the surcharge would be increased at the next audit.

Medical Inspection of School Children.—Further evidence was brought before the council of extra work not contemplated in the Poor Law Orders being put upon Poor Law medical officers in consequence of recent legislation. A communication had been received from a member, enclosing a letter from the clerk to his guardians, requiring him to visit and examine twenty children to ascertain whether they were properly fed. Some of the council thought that such an Order was illegal, but the honorary secretary pointed out that the district medical officer was bound to attend to any order issued by the relieving officer, overseer, or by the board of guardians in its corporate capacity, although complaint might be made afterwards to the guardians or Local Government Board. The clerk's letter amounted to an order from the Board. He thought this was a very proper case to bring before the Local Government Board, as the evidence was so clear, but the complainant would not give his permission for fear of losing his vaccination appointment if he made any complaints.

Royal Commission on the Poor Laws.—The council then considered the report of the Royal Commission on the Poor Laws. Satisfaction was generally expressed at the justice done to the Poor Law Medical Service, and the frank recognition of its valuable and unselfish public work in the past despite the glaring inadequacy of the remuneration; but exception was taken to the proposed abolition of that service in the future. In the opinion of the council the existence of such a service was absolutely necessary for the public good, and reform should be directed to making it more efficient. After much discussion the council decided that more time would be required to deal properly with the report, but it thought that some preliminary resolutions might be considered concerning which there would probably be practical unanimity among all Poor Law medical officers. The following resolutions were finally put and carried unanimously:

1. That this council desires to express its grateful acknowledgement of the unanimous testimony borne by the Royal Commission to the value of the past services of Poor Law medical officers, and its recognition of the disadvantages under which they have laboured and the inadequacy of their remuneration.
2. That, in the opinion of this council, it is impossible for Poor Law medical relief to be organized on a provident basis, as the only proper recipients of such relief are, by reason of their poverty, unable to contribute anything; that those able to contribute are proper objects for charitable assistance.
3. That the council views with disapprobation the proposal to draft the State poor on to provident medical institutions; that, in its opinion, it would result in converting the same into Poor Law institutions, mainly supported by the rates; that it would be disastrous to these institutions by driving away many, if not all, of that class for whom they were specially created. Further, that it would largely increase the number of the State poor by adding to them many of the poorer members of provident medical institutions, and by so doing would inevitably cause great injury to the whole medical profession, especially the practitioners in poor districts.
4. That the council strongly condemns the proposal to make every medical practitioner a Poor Law medical officer, and it does so for the following reasons:
   (*a*) That it would be many times more expensive than the present system.
   (*b*) That the value of the work done could never be properly tested, as no system of Local Government Board inspection could deal with so widely extended an arrangement for Poor Law medical relief.
   (*c*) That it would largely tend to provide free medical relief to all poor persons, and to increase, rather than diminish, the pauperization of the nation.
   (*d*) That the interests of the sick State poor would be far better attended to by a special service, the members of which were paid adequately, and whose work was capable of proper inspection.
5. That the council strongly disapproves of the proposal to allow a poor person to claim State medical aid without the intervention of a relieving officer or assistance officer; that it would be opening the door widely to gratuitous medical relief to all members of the poorer classes; that it is no part of the duties of a Poor Law medical officer to decide as to the right of a poor person to State relief; and, as in any widely extended system it would be necessary to pay for the items of work done by the medical officer, it would be a direct incentive to the latter to admit too readily the claims of poverty. That for the protection

of the ratepayer it is absolutely necessary that there should be a skilled lay officer to decide who are proper applicants for medical relief. That in thickly-populated areas there is no hardship in requiring applicants to get an order from an assistance officer, and that instances of the deserving State poor being deterred from applying to the Poor Law medical officer through having first to obtain an order, are in urban districts conspicuous by their rarity.

DISINFECTION.

BELFAST and EAST ANGLIA.—Spraying with a solution of formalin is a very common and excellent method of disinfecting rooms after they have been occupied by scarlet-fever patients. The furniture should be sprayed with the solution, 1 part in 40 of the 40 per cent. solution, and should then be thoroughly cleaned with soap and water.

INFECTIOUS DISEASE IN HOTEL.

MIDLANDS.—(1) The manager of a hotel can insist, after giving suitable notice, upon any guest quitting his hotel. (2) In a county court action by an innkeeper to recover the cost of disinfecting rooms which had been occupied by a guest who had died from consumption while in the inn, it was held by the county court judge that the cost could be recovered on the ground that the law would imply a contract on the part of the guest to pay for any extra expense properly incurred by the innkeeper as a consequence of the reception of the guest. A claim for damages for the loss of use of rooms during the time of disinfection was not successful (*Law Times* (1899), vol. cvii, p. 101). No references or names of parties are given. Quoted in Copnall's *Infectious Diseases and Hospitals*.

MEDICAL CERTIFICATION OF WORKHOUSE LUNATICS.

H. C., who writes with reference to a short article on the above subject which appeared in the BRITISH MEDICAL JOURNAL of March 6th, p. 630, refers to several lunacy cases which he had himself attended, and which were removed to the workhouse and thereby passed altogether out of his hands, though subsequently sent to an asylum. In reference to a fourth case of somewhat similar character, he says that he wrote to the relieving officer asking whether it would not be possible for the lunacy of patients detained in a workhouse to be certified (if necessary) by their own previous medical attendants, with the result that he was called upon to certify this fourth. Later still another case cropped up, and our correspondent was asked by the relieving officer to call at the workhouse to certify to the lunacy, which he did. He further says: I should like your opinion on this matter as presented by myself, in view of the fact that you have expressed the opinion that soliciting engagements to certify to lunacy cases in a workhouse was an unfriendly action." He adds: "Had I solicited to certify cases not my own I should have agreed with you."

*** If the account given is strictly correct, which we have no reason to doubt, namely, that our correspondent has only certified cases which had been previously under his own care, we cannot regard his going to the workhouse for this purpose and subsequently certifying as being in any way a breach of professional etiquette. Should any such cases recur, we think he would show a wise discretion by calling or leaving his card on the medical officer of the workhouse before visiting the patients, but as to this he really ought to be a better judge than ourselves.

Obituary.

SIR ARTHUR RENWICK, M.D., F.R.C.S.,

SYDNEY, N.S.W.

THE death took place in Sydney on November 22nd last of Sir Arthur Renwick, M.D., F.R.C.S.Edin., in his 72nd year.

He was one of the first graduates in Arts in the University of Sydney, and as there was no medical school in Sydney in those days, he proceeded to Edinburgh, where he took the degree of M.D. and the diploma of F.R.C.S. He returned to Sydney, and soon acquired a leading practice. He was elected the first President of the New South Wales Branch of the British Medical Association. While he was still quite a young man he was elected to the Honorary Staff of the Sydney Hospital, and he remained connected with that Institution up till the time of his death, though not in the capacity of honorary medical officer, but as President. He also early became connected with the Benevolent Asylum, and the Institution for the Deaf and Dumb. He was President of the Medical Board for many years, and was always most regular and punctilious in his attendance at all the meetings over which he was accustomed to preside. He was also a member of the Senate of the University of Sydney, and had served in the office of Vice-Chancellor on several occasions.

Many years ago he entered Parliament, and represented the constituency of East Sydney. He was at different times Minister of Mines and Minister of Education. Later on he was elevated to the Legislative Council, and he was a member of that body up to the time of his death. In the year 1892 he was appointed Executive Commissioner for New South Wales to the Chicago Exhibition, and two years later he received the honour of knighthood for his services in that capacity.

Sir Arthur was attacked with influenza some months before his death, and this weakened his heart so much that he was never able again to take up his duties. His funeral was largely attended by members of the profession and representatives of the various charitable institutions with which he had been connected during his long and useful life. His death has removed one of the most active philanthropists of Australia.

JAMES HURD KEELING, M.D.EDIN., F.R.C.S.ENG.,

CONSULTING SURGEON TO THE HOSPITAL FOR WOMEN AND ROYAL HOSPITAL, SHEFFIELD.

DR. J. HURD KEELING, who had been in failing health for several years, died at his residence in Sheffield on March 15th, aged 77. He was the son of the Rev. John Keeling, a well-known Wesleyan minister, who at that time resided at Malta. The family returned to England while the boy was still young, and he attended a well-known Wesleyan school at Woodhouse Grove, near Leeds. He prosecuted his medical studies at Edinburgh University, which he entered in 1848; he took the degree of M.D. in 1852, and he afterwards visited London (where he took the diplomas of M.R.C.S. and L.S.A.), as well as Paris and Vienna, for purposes of medical study. He then became an assistant to Dr. Thorpe at Staveley, but when the Russian war broke out in 1854 he went as surgeon to the second regiment of the Turkish contingent, and his services in that capacity were rewarded by the decoration of Officer of the Order of the Medjidieh. After the war he returned to Staveley, but in 1858 settled in Sheffield; here he acquired the practice of Dr. Cheetham, settling at Crow Tree House, Broomhall Street, then a country residence in the midst of a big garden; there he lived with his sister until he removed to Glossop Road a few years later. In 1860 he was appointed Lecturer on Medical Jurisprudence at the Sheffield Medical School, thus beginning an association with the teaching of medicine in Sheffield which lasted nearly forty years. When he accepted this office he made the stipulation that toxicology should be taught by a chemist, and Dr. Allen accordingly undertook this part of the subject. Four years later he was appointed Lecturer on Physiology in the Medical School, the affairs of which at that time were in so unsatisfactory a condition that it had been proposed to close it. Dr. Keeling was one of those by whose efforts the school was reconstructed in 1865. Dr. Keeling then resigned the lectureship in physiology, and was appointed, in conjunction with Dr. Aveling, Lecturer on Midwifery and Diseases of Women, and continued to lecture on this subject for thirty-two years.

When the Hospital for Women was founded in 1864, Drs. Keeling, Aveling, and E. Jackson were appointed the medical officers, and afterwards, through the generosity of Mr. Thomas Jessop, the Jessop Hospital for Women was erected. Dr. Keeling took a great interest in the hospital, and not only himself gave generous financial assistance, but was instrumental in obtaining a considerable proportion of the funds required for its extension in 1902. The position attained by the Jessop Hospital as one of the leading medical charities of Sheffield was largely due to his efforts, and when he retired in 1906 the board elected him Honorary Consulting Medical Officer, and placed on record its high appreciation of his valuable and disinterested work. A proposal to present him on behalf of the medical profession with a public testimonial on this occasion was abandoned owing to Dr. Keeling's own objections. Dr. Keeling was elected Surgeon to the Royal Hospital, Sheffield, in 1862, an office he retained for twenty-five years. When the British Medical Association met in Sheffield in 1876 Dr. Keeling was associated with the late Mr. A. Jackson in the office of Honorary Local Secretary, and his friends would have been glad if he could have been persuaded to have accepted an honorary official position at the memorable meeting last year. For many

years Dr. Keeling took an active part in the work of the Sheffield Medical Society, and contributed many papers from time to time, although he does not appear ever to have published any of them. He was a man of marked ability, well versed in medical literature, and possessing a ripe and varied experience. In disposition he was reserved, delighting in secret kindnesses and self-sacrificing labour, but receiving any acknowledgement of his good deeds with characteristic brusqueness.

W. H. DAY, M.R.C.S., L.S.A.,

NORWICH.

THE death occurred, after a long illness, on March 15th, at the ripe age of 85, of Mr. W. H. Day, of Norwich.

William Hankes Day, who was descended from an old Norwich family, several of whose members had been very prominent in the life of the city, was born in 1824. He was a son of Mr. William Day, for over forty years clerk to the magistrates. He received his medical education at St. Thomas's Hospital, and obtained the diploma of M.R.C.S. in 1845, and that of L.S.A. in the following year.

After acting for a short time as surgeon to the Reading Dispensary, he entered into partnership in 1849 with Mr. W. P. Nicholls, then a well-known practitioner in Norwich. Eighteen years later, the partnership having come to an end, Mr. Day began to practise on his own account. For many years he was medical officer to the Lakenham district, and was also surgeon to the Jenny Lind Infirmary for Children, the Maternity Charity, and the city gaol. For forty-two years he was surgeon to the Girls' Hospital School. His practice brought him much into contact with the poor, and he discharged his duties with such solicitude and conscientiousness that he received the very unusual tribute of a testimonial got up by the parochial poor entirely on their own initiative. Mr. Day had at one time the largest obstetrical practice in the Norwich district, and had, it is said, attended as many as 8,000 confinements.

In his earlier years he was fond of amateur theatricals, and turned his capabilities in that respect to account to assist the volunteers, a service in which he took a great interest.

Mr. Day was Chairman of the Committee which raised the memorial fund to the late Mr. William Cadge, and his last public appearance was at the ceremonial of the unveiling of the memorial window erected from the proceeds of that fund in December, 1904.

Mr. Day married in 1849, and leaves five daughters, one of whom is the Matron of the Norwich Grammar School.

We are permitted to publish the following appreciation of Mr. Day, contributed by Dr. Michael Beverley to the *Eastern Daily Press:* The Dean of our local faculty, after a long and to him weary waiting, is gone to that rest which he has so earnestly anticipated. It is true that he found a solatium in his books and his facile pen, and to the last continued to take a keen interest in all the current topics of the day. His contributions to your columns were not infrequent, and often under a thinly-veiled anonymity his friends detected the well considered and pointed criticisms so characteristic of the man. But, in spite of this and the treasures of a well-stored mind and memory, I know of no one who felt so keenly his enforced inaction as William Hankes Day. To those of us—and but few now remain, who have pleasing reminiscences of Mr. Day in his prime—we remember him as one of the hardest-worked medical men in the city of Norwich, greatly respected by his colleagues, beloved by a large *clientèle* of patients of all classes, a *persona grata* wherever he went, especially in Lakenham, where his name was a household word. At all times, day and night, in all weathers, he might be seen driving about with an old-world-looking coachman, whose face was as familiar to the man in the street as his master's. William Day was a fine example of the cultivated general practitioner of the old school. He was never known to commit a breach of professional etiquette or to be guilty of a mean action. *Noblesse oblige* found in him a true exponent, and this was felt and appreciated by his fellows. The last work in which, after his retirement, he engaged, to him a real labour of love, was the chairmanship of the committee by whose exertions a memorial window was placed in the Cathedral to the memory of his old friend, Mr. Cadge. All of us who served under him can bear testimony to the enthusiasm which he threw into this very considerable undertaking, the accuracy of his artistic taste and judgement to which was due the splendid work of art which appropriately illustrates the life and work of a great surgeon. Nor can those who were present at the unveiling in the Cathedral ever forget the pathetic scene, and the deep feeling evinced by our octogenarian leader, when he read the dedication (composed by himself) in the presence of the President of the College of Surgeons, and his colleagues on the Council, of medical men from far and near, and a crowded congregation of his fellow citizens. The memory of William Day will ever remain green amongst all who were privileged to claim his friendship.

We regret to have to announce the death of Dr. ROBERT HENRY COALL, which took place at Cannes on February 20th last, from heart failure following pneumonia. Dr. Coall, who was the son of Mr. Talbot Coall, of Kingstown, Dublin, was born on February 20th, 1859. Educated at the Carmichael School, he took the diplomas of L.M.Rotunda Hospital (special certificate) in 1881, L.R.C.S.I. in the following year, and in 1884 L.R.C.P. and L.M.Edin. He was Resident Medical Officer to the City of Dublin Hospital, and afterwards commenced practice near Leicester. A few years later, his success having justified the removal, he settled in Bedford Square, London, and as practice increased removed to 65, Brook Street, Grosvenor Square, where the illness commenced from the effects of which he ultimately died. It is now some thirteen years since an attack of haemoptysis warned him that the success which had attended his professional career had been bought at too great a sacrifice of strength, and he was obliged to relinquish to an increasing extent the large practice which he had gained in London, and spend more of each year in a warmer climate. Dr. Coall was an example of the cultured practitioner; his patients became his friends, nothing that he could do for their welfare was too much trouble, and although regular attendance of recent years was not possible for most, his yearly arrival in the summer was eagerly anticipated by them and his advice highly valued. Few who met him in recent years had any suspicion of the fact that he was an invalid; only his great strength of character and unselfish disposition, however, enabled him to go about as he did. His death has come as a surprise, therefore, to many, and to these it will be a consolation to know that although he died abroad, he had devoted friends with him during his last illness, and received every attention at the hands of Dr. Carr, of Cannes. We may add that he was also seen in consultation by Sir Dyce Duckworth, Dr. Osler, and Professor Lingard.

Dr. FREDERICK IRVING KNIGHT, of Boston, who died on February 20th, was one of the pioneers of laryngology in America. Born in 1841 he graduated at Yale in Arts and at Harvard in Medicine in 1866. Afterwards he studied in Vienna, London, and Berlin. In 1872 he was appointed instructor in the diagnosis of diseases of the chest and in laryngology at Harvard. This was the first clinic of its kind in New England. In 1886 he was made Clinical Professor of Laryngology, a position which he held until 1892. Dr. Knight was one of the founders of the American Laryngological Association and one of its early presidents. He was also President of the American Climatological Association, of the Boston Society for Medical Improvement, and of various other scientific bodies. He took a prominent part in the movement against tuberculosis.

DEATHS IN THE PROFESSION ABROAD.—Among the members of the medical profession in foreign countries who have recently died are Dr. Heinrich Brat of Berlin, well known by his writings on industrial hygiene, aged 41; Dr. N. Prawossud, Lecturer on Ophthalmology in the University of Moscow, aged 48; Dr. André Boursier, Professor of Gynaecology in the University of Bordeaux, and President of the Society of Anatomy and Physiology and of that of Medicine and Surgery of that city, aged 58; and Dr. Hugo Gnändinger, for many years Director of the Crown Prince Rudolph Children's Hospital, Vienna.

Letters, Notes, and Answers.

BRITISH MEDICAL ASSOCIATION AND BRITISH MEDICAL JOURNAL

THE offices of the British Medical Association and of the BRITISH MEDICAL JOURNAL are at 429, Strand, London.

COMMUNICATIONS respecting Editorial matters should be addressed to the Editor, 429, Strand, London, W.C.; those concerning business matters, advertisements, non-delivery of the JOURNAL, etc., should be addressed to the Office, 429, Strand, London, W.C.

TELEGRAPHIC ADDRESS.—The telegraphic address of the EDITOR of the BRITISH MEDICAL JOURNAL is *Aitiology, London.* The telegraphic address of the BRITISH MEDICAL JOURNAL is *Articulate, London.*

TELEPHONE (National):—
2631, Gerrard, EDITOR, BRITISH MEDICAL JOURNAL.
2630, Gerrard, BRITISH MEDICAL ASSOCIATION.
2634, Gerrard, MEDICAL SECRETARY.

ORIGINAL ARTICLES and LETTERS *forwarded for publication are understood to be offered to the* BRITISH MEDICAL JOURNAL *alone unless the contrary be stated.*

AUTHORS desiring reprints of their articles published in the BRITISH MEDICAL JOURNAL are requested to communicate with the Office, 429, Strand, W.C., on receipt of proof.

CORRESPONDENTS who wish notice to be taken of their communications should authenticate them with their names—of course not necessarily for publication.

CORRESPONDENTS not answered are requested to look at the Notices to Correspondents of the following week.

MANUSCRIPTS FORWARDED TO THE OFFICE OF THIS JOURNAL CANNOT UNDER ANY CIRCUMSTANCES BE RETURNED.

In order to avoid delay, it is particularly requested that ALL letters on the editorial business of the JOURNAL be addressed to the Editor at the Office of the JOURNAL, and not at his private house.

☞ *Queries, answers, and communications relating to subjects to which special departments of the* BRITISH MEDICAL JOURNAL *are devoted will be found under their respective headings.*

QUERIES.

ETIOLOGY OF SPLENIC LEUKAEMIA.

SCOTICUS asks: Is splenic leukaemia known to follow carbon monoxide poisoning? As for instance in these circumstances—where a man has been exposed to carbon monoxide poisoning three times in twelve months and dies within the following year from splenic leukaemia. Also can there be any connexion between splenic leukaemia and malignant disease of the spleen? What authorities can be quoted?

RESULTS OF THE "KNOCK-OUT" BLOW IN BOXING.

R. W. M. writes: In view of the great booming of boxing now, when we hear of matches and competitions, amateur and professional, on every side, I am curious to inquire into the results, or rather the after-history of those men who have been "knocked out." Can any one tell the after-history of any of these men? Some are "knocked-out" by blows on the angle of the jaw, or rather I should say the point of the chin, others by blows over the heart, and a third lot by blows over the solar plexus. To me, this seems the most serious. I understand that Fitzsimmons "knocked-out" man after man by blows over the solar plexus, that the men fell groaning, and were carried from the ring in a state of more or less insensibility. Can any one tell the after-history of those men? Did they recover perfectly, or were there any evil effects left, and what were the after-symptoms? I have heard that many "never were themselves again," but as to that I do not know.

ANSWERS.

J. L. M.—(1) Messrs. Holloway and Webb, Limited, military camp outfitters, 347, Cable Street, E., inform us that a well-made military tent used, say, twice in each year, has a life of about five years. When stored it should be put away perfectly dry and in a dry place. (2) Berthon tents are used for cases of enteric fever. (3) A joint hospital board decides for itself which infectious diseases shall be admitted into the hospital under its control.

FRENCH MEDICAL PERIODICALS.

FRENCH.—There are a multiplicity of periodicals suitable to our correspondent's purpose. Of those published in Paris, *La Semaine Médicale* (53, Avenue de Villiers, foreign subscription 15 francs, subscriptions commence January 1st, back numbers being supplied) would perhaps prove most satisfactory at the present time. Among the few monthlies, the *Archives Générales de Médecine* (25, Rue de l'Ecole de Médecine, foreign subscription 18 francs, commencing from any quarter-day) stands highest. Other journals are *Le Progrès Médical* (46, Rue des Écoles, 12 francs), *La Tribune Médicale* (152, Rue de Vaugirard, 12 francs), both weeklies; and the *Gazette Médicale de Paris* (1, Rue Casimir Delavigne, 7 francs) a fortnightly publication.

LETTERS, NOTES, ETC.

ERRATUM.—In the second line from the end of Dr. Horace Dobell's letter on Sleep and Want of Sleep (BRITISH MEDICAL JOURNAL, March 13th, p. 691), for "Ft. guttae ʒiv" read "Ft. guttae ℥iv."

AN APPEAL TO MASONS.

MR. SYDNEY GRAHAM, M.R.C.S., L.R.C.P. (Watchet, Somerset), writes: Will you permit me through the columns of your JOURNAL to make an appeal to all professional brethren who are Freemasons to give their assistance in the following case: Dr. John Henry Sharpe, aged 45 years, who was formerly in practice at Huntspill, Bridgwater, who held the office of Medical Officer and Public Vaccinator under the Bridgwater Board of Guardians for fourteen years, and a member of the Highbridge Lodge No. 291 (W.M. 1895 and Secretary for three years; also W.M. Mark Lodge No. 191, and P.Z. of Chapter 291), had, unfortunately, in 1904 to give up his practice owing to the development of ataxic symptoms. Since that time he has not been in a position to earn anything owing to the state of his health, and he has no private means. He has a wife and six young children dependent upon him, and by the kindness of his friends and craft he has been greatly aided in getting them educated, and he now ventures to make a further appeal to charitable Masons to help him to get his son, Edward Herbert, aged 10, into the Royal Masonic Institution for Boys. This appeal would not be made if there was any probability of an improvement in Dr. Sharpe's physical or financial condition, and in proof that the case is one thoroughly deserving of the brethren's sympathy and support, I am permitted to say that the application is supported by Dr. Vereker, Langport; Dr. F. C. Berry, Burnham; Dr. N. Burns, Highbridge; Dr. C. R. Bishop, Shepton Mallet; and the Charity Organization Society of Somerset. Any members holding votes in either of the Masonic charities are earnestly requested to forward them to T. F. Norris, Esq., Charity Delegate, Highbridge, Somerset, as soon as possible, as the election takes place in April.

BOYS' RACES.

MR. J. HERBERT FARMER (London, W.) in the course of reply to criticisms, writes: My critics carefully avoid or carelessly miss the point of the medical opinion to which I was privileged to give publicity. You will remember that five of the most eminent medical authorities Britain possesses—Sir Lauder Brunton, Sir Thomas Barlow, Sir Alfred Fripp, Dr. James F. Goodhart, and Dr. W. Hale White—speaking from their personal experience and that of their professional colleagues, emphatically condemned, in their letter to me, races exceeding one mile in distance for the average healthy schoolboy under the age of 19. Yet schoolmasters and others argue that, because they themselves have not known cases of injury through long-distance racing, such cases do not occur; whilst some persons evidently have failed to realize the essential difference between (*a*) a long-distance *race* for a prize in which the competitors will gamely struggle along till they drop in their anxiety to win the cup; and (*b*) road or cross-country *runs*, which are taken merely for purposes of exercise, and in which the boys can and do enjoy frequent restful "breathers" whenever they begin to feel the warnings of exhaustion.

DR. HEBERT.

IN its issue for February 27th the *West London Gazette* notes that on the 22nd of the same month the *Star* and the *Morning Leader* settled out of court, by payment of agreed damages, actions for libel brought against them by Dr. P. Z. Hebert of Marylebone. They had previously published expressions of apology and regret. A record is added of a large number of other papers which at earlier dates adopted a similar course. The libel consisted in the publication some two years ago of an account of an affair near Paris in which Dr. Hebert was wounded. It was alleged that the principals in this affair were a gang of swindlers carrying on a matrimonial agency, Dr. Hebert being their English confederate. The affair was the subject of very prolonged police inquiry, but eventually all charges against Dr. Hebert were dismissed.

THE DOMESTIC PREPARATION OF SOURED OR CURDLED MILK.

G. R. G. writes: A patient who has suffered from colitis has been taking curdled milk daily with much benefit. The milk has been curdled by the addition of lactic acid tablets at a temperature of 104° F., and from a pint and a-half to two pints has been taken each day. Latterly he has been in the habit of adding to the fresh milk along with the tablets a small quantity of the whey from the previous day's "brew," and he finds that this considerably hastens the curdling, which with the tablets alone takes from eight to ten hours. But it also makes the product much more sour and acid, and I have my doubts as to whether it is a wise proceeding, as I think it is likely that other acids and ferments may be present, which are undesirable. Can any of your readers who have had experience of the curdled milk diet give advice on this matter?

MR. JOHN G. HUME (Duns) writes: It became my duty some time ago to provide a daily supply of curdled milk. Because of the difficulty which many find in providing the same, I think it worth while to detail the method used. The milk was just brought to the boil at any convenient time (say in the forenoon), and allowed to cool in the vessel in which it had been boiled. When sugar was dissolved in the milk this was done immediately on its removal from the fire. At (say)

10 p.m. the cooled sterilized milk was skimmed and gently heated up to 106°-110° F. in the original saucepan. (Rewarming cold sterilized milk at this stage is more convenient than boiling fresh milk and allowing its temperature to drop to that mentioned.) The milk was then inoculated with one of the various lactic acid bacilli preparations and poured into a Thermos flask, previously warmed. After corking and shaking, the flask was laid aside overnight. Incubation went on, with no further attention whatever, and the following morning the milk was curdled and in good condition for being used as an article of diet or as a therapeutic agent. At the temperature mentioned nine or ten hours in the flask was found sufficient. When sufficiently curdled the flask was thoroughly shaken and the milk poured into a jug, which was then kept in a cool place during the day till the milk was all used. This process was repeated daily, over a long period, and was found to be the easiest and best method of preparing curdled milk in the home reasonably free from contamination by extraneous organisms. By altering the hour and the temperature (within limits) at which the process is started the milk can be brought to its best condition at any desired hour. That hour is generally the breakfast hour. It is necessary to keep the flask and cork clean by means of alkaline water, when not in use during the day, but in the evening, before use, they must be thoroughly freed from alkali before the cycle begins again. I am encouraged to write this note because of complaints I have heard that curdled milk is difficult to prepare in the home. I find that by the method described above it can be prepared as easily as many other articles of diet, and that its preparation can be undertaken by any intelligent person. The milk used must contain no preservative whatever.

THE APPLICATION OF MENDELIAN RULES TO MAN.

DR. H. DRINKWATER (Wrexham) writes: I am sorry that Professor Karl Pearson is again guilty of misrepresentation, though, no doubt, it is unintentional on his part. At the end of his last letter he refers to "popular lectures and magazine articles," and in the second paragraph of the same letter to "a public lecture given by" me on Mendelism. Now, I have not, so far, written any magazine article, and the lecture to which he refers was given as a presidential address to a medical society, and can scarcely be termed "public." The professor's conclusions as to the effects of the views I have expressed in previous letters may be quite correct, but they by no means prove that my views are wrong, and whatever theoretical considerations may be involved I can come to no other conclusion, and I do not see how any one else can come to any other conclusion, than that that part of Nettleship's chart *which includes all the abnormals* is as strictly Mendelian as anything with which we are acquainted, and containing the same amount of material.

LYNN THOMAS AND SKYRME FUND.

Twenty-Second List of Subscriptions.

MR. WILLIAM SHEEN, M.S., F.R.C.S. (2, St. Andrew's Crescent, Cardiff), Honorary Secretary of this Fund, desires to acknowledge the following subscriptions:

Subscriptions to March 11th.

	£	s.	d.
Barnstaple Division, British Medical Association, per Ellis Pearson ...	1	17	6
Maidstone Division, British Medical Association, per J. A. Gibb	3	18	6
H. G. Pesel, Pickering	0	5	0

IS CANCER CURABLE?

DR. ALEXANDER DUKE (London, W.) writes: The various vaunted *cures* for this terrible disease having *all* been found wanting, the interesting question arises, Which is most difficult, to diagnose the disease without doubt or cure the same when discovered to a *certainty?* I venture to ask the following questions: (1) Is cancer *curable* by operation? (2) If so, what time must elapse from date of operation till patient can be *positively certified as free from the disease?* (3) Can the diagnosis of uterine cancer be *made to a certainty* by any means at our disposal (including the microscope)? (4) Cancer being a constitutional disease manifested by local signs (somewhat like tubercle), how can the removal of the various local manifestations arrest the disease *for good*, or prevent it showing itself by metastasis? Oral sepsis having been found contributory to the various forms of toxaemia, it might be interesting to make inquiry as to the state of the mouth in *undoubted* cancer cases. Probably when the *real cure* is found it will be doubted, reminding one of the old fable: "A wolf! a wolf!"

LIME: AN OLD SCOTTISH CUSTOM.

DR. J. A. WILSON (Cambuslang) writes: My maternal grandparents had a large family of sons and daughters, and on Sunday mornings the old lady assembled her daughters, and gave to each a glassful of lime water. In rotation each had to swallow the dose, while the boys, as if of a different order of things, escaped. I do not know that the custom was widespread, but that it existed may be of interest in view of recent investigations into the relationship between menstruation and calcium metabolism.

SOUTHWOLD LIBEL CASE.

THE following additional subscriptions have been received by the fund opened to assist Drs. Mullock and Tripp in defraying the heavy expenses which they incurred as the result of the recent action which they were called upon to defend:

	£	s.	d.
Dr. E. S. Moorhead, Winnipeg, Canada	5	5	0
Anonymous, Suffolk	2	2	0
Dr. J. Allnutt, Wangford, Suffolk ...	1	1	0
Dr. S. W. Woollett, Newmarket (late Southwold)	1	1	0
Dr. F. E. Rock, Winchmore Hill, N. ...	1	1	0

Cheques should be made payable to Dr. H. P. Helsham, Beccles, or to Dr. W. Tyson, Lowestoft.

MEDICAL FOOTBALL.

BY twenty-one points, or by seven tries to nothing, Guy's Hospital defeated Middlesex in the final round of the Cup Tie, played last Tuesday at Richmond.

Despite the fact that the result was looked upon as a certain win for Guy's, there was a very fair attendance, and during the first half-hour of play the supporters of the Middlesex had the satisfaction of seeing the hospital hold its own against Guy's with complete success. After about twenty minutes of play, however, Gabe had to retire owing to an injured shoulder, and Harrison was brought out of the "scrum" to take his place in the three-quarter line. For ten minutes longer the Middlesex defence held, but at last they gave way to pressure, and as a result of some clever play between Sauer and Medlock, Lee succeeded in slipping over the line. A second try followed almost immediately, Stokes touching down. As before, he took the kick, but failed to convert. When half-time was called Guy's led by two tries to nothing, and the most interesting features of the game had been the excellent defence of the Middlesex backs, contrasting with the brilliant attacking qualities of their rivals. Even in this half the Guy's forwards showed their superiority, getting the ball in nearly every "scrum," and heeling it out to their backs. The Middlesex pack were only able to shine occasionally in the open, scoring several advantages by individually clever work.

The interval at half-time encouraged Guy's, but completely disorganized the Middlesex, who, it must be remembered, were playing with a man short. Almost immediately after play was resumed, Guy's pressed their opponents, their opportunity being due to the treacherous greasiness of the turf. One of the backs fell, and there was a "scrum" almost on the Middlesex line, only relieved after a bout of keen forward play by Penny, who took the ball across the ground. The first score of the second half was due to a clever bit of individual play by Williams, who successfully passed the line. After the resumption of play, Middlesex, for the only time in the game, seriously took the offensive, and, circumventing Guy's, kept them hard at work defending within their twenty-five. The situation called for heroic measures, Stringer and Jones combined, took the ball up the field, gave Stokes his opportunity, and enabled him to score. Stokes failed to convert, despite the fact that there was no wind, this being the fourth attempt. For the rest of the game the Middlesex remained on the defensive, and the interest of the match centred in a debate among the lookers-on as to how many tries the winning hospital would have to score before they would be able to convert a single one of them. The game failed to answer the question, though a seventh try was scored before time was given. For the losing side, Penny was the most conspicuous, and to him Middlesex owed the flashes of brilliant play that mitigated their defeat. The winners owed most to Lee and Jones, who gave a capital display of unselfish combination. Sauer and Medlock, at half, proved extremely effective, and Stringer was very conspicuous. Medley did well as full back.

Including the result of Tuesday's match, Guy's have held the Inter-Hospital Cup twelve times. St. Thomas's come next to them with ten wins. The number of wins to the credit of the other hospitals are: London, five; St. George's, three; St. Bartholomew's, two; and St. Mary's, one. In 1890-1 the competition was unfinished.

SCALE OF CHARGES FOR ADVERTISEMENTS IN THE BRITISH MEDICAL JOURNAL.

	£	s.	d.
Eight lines and under	0	4	0
Each additional line	0	0	6
A whole column	2	13	4
A page	8	0	0

An average line contains six words.

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